



DOD PROJECT MANAGER MOBILE ELECTRIC POWER



PROPOSED DEPARTMENT OF DEFENSE HANDBOOK

MIL-HDBK-633F

STANDARD FAMILY OF MOBILE ELECTRIC POWER GENERATING SOURCES

GENERAL DESCRIPTION INFORMATION AND CHARACTERISTICS DATA SHEETS

PREPARED FOR PM-MEP BY

MTC Modern
Technologies

NOTE: This draft, dated 16 June 1997, prepared by the US Army Communications-Electronics Command, Logistics and Readiness Center, ATTN: AMSEL-LC-IEW-D-ED, has not been approved and is subject to modification. DO NOT USE PRIOR TO APPROVAL. (Project 6115-07400).

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MIL-HDBK-633F

SUPERSEDING

MIL-STD-633E

22 February 1980

(PROPOSED)

DEPARTMENT OF DEFENSE HANDBOOK

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GENERAL DESCRIPTION INFORMATION AND CHARACTERISTICS DATA SHEETS



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FOREWORD

1. This Military Handbook is approved for use by all Departments and Agencies of the Department of Defense (DoD).

2. This handbook is for guidance only. This handbook cannot be cited as a requirement. If it is, the contractor does not have to comply.

3. Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: USA Communications-Electronics Command, Logistics and Readiness Center, 10115 Gridley, Suite 228, Fort Belvoir, VA 22060-5849, by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

4. Preparation of this document has been authorized by the Department of Defense Directive 4120.11, Standardization of Mobile Electric Power (MEP) Generating Sources, July 9, 1993, which assigns to the Project Manager, Mobile Electric Power the responsibility for establishing the Department of Defense (DoD) Standard Family of Mobile Electric Power Generating Sources (MEPGS). Military Handbook 633F revises the Standard Family by the deletion of most Military Standard gasoline engine-driven generator sets, the addition of the 2 kW Military Tactical Generator (MTG), the MEP-501A (DC) and the MEP-531A (AC), and the replacement of the 3 kW - 60 kW Standard Family of Diesel Engine Driven (DED) models by Tactical Quiet Generators (TQG) for future procurement. The present and proposed MEPGS and their associated trailer mounted configurations are included in Appendix A. Aircraft Ground Support Power Units MEP-360A, MEP-356A and MEP-357A are included in the Standard Family and are listed in Appendix B. Auxiliary Power Units (APU) MEP-952A and MEP-903A have been added to the Standard Family in accordance with guidance provided in SARD-ZCS Memorandum, Army Acquisition Executive Policy Memorandum #90-3, Auxiliary Power Units (APUs) and Environmental Control Units (ECUs), 13 July 1990, and are listed in Appendix C. In addition, the Power Distribution and Illumination System, Electrical (PDISE) has been included as Appendix D. Members of the old Standard Family which are still being supported in the logistics system, many of which have no immediate replacement, have been included in Appendix E.

The following are extracts from DoD Directive 4120.11:

D. POLICY

1. It is DoD policy to:

a. Establish, maintain, and provide a DoD Standard Family of MEP generating sources for maximum DoD Component Use.

b. Implement the standardization policies of DoD Instruction 5000.2 on MEP generating sources through the establishment of common military operational requirements, design and development, procurement, logistic support, and operational use by:

(1) Planning and coordinating the DoD development, engineering, and product improvement efforts. The requirements shall be satisfied to the maximum practicable extent through the use of nondevelopmental items.

(2) Ensuring the availability of standard MEP generating sources that will meet DoD-wide needs with the required electrical performance, reliability, maintainability, durability, and versatility by the most cost effective means.

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(3) Reducing diversification of MEP generating sources entering the DoD Supply system, thus minimizing logistic support without compromising mission accomplishment of the DoD Components.

(4) Standardizing, to the maximum extent practicable, the electrical output characteristics of the MEP generating sources, consistent with military systems and equipment needs under MIL-STD-1332.

2. In designing and developing end items and systems requiring electric power from MEP generating sources, the DoD Components shall consider the characteristics and suitability of the DoD Standard Family of MEP generating sources, as defined in MIL-HDBK-633.

3. When MEP generating sources are designed in, and procured as, an integral part of an end item or system, the current DoD standard MEP generating sources in MIL-HDBK-633 shall be used to the maximum extent practicable.

4. The DoD Components requiring MEP generating sources other than those available in the standard family shall so advise and obtain approval from the PM-MEP before starting procurement. The PM-MEP shall expedite action on such requests."

5. Fuel Policy

a. DoD Directive 4140.25, SUBJECT: Bulk Petroleum Management Policy, establishes DoD bulk Petroleum Management Policy. The Fuel Standardization policy is stated as "The DoD Components shall minimize the number of bulk petroleum products that must be stocked and distributed, plan to use fuels readily available worldwide, and minimize the military-unique characteristics of DoD fuels. The DoD Components shall plan, program, and budget to design and qualify new systems to use readily available mid-distillate type fuels, under procedures in DoD Instruction 5000.2."

b. This statement is normally referred to as the "DoD single fuel forward policy". It is accepted to include diesel (DL-1, DL-2) and Jet Propellant (JP-8).

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1. SCOPE

1.1 General. This handbook provides detailed information on the physical and electrical characteristics and logistical data on the DoD approved Standard Family of Mobile Electric Power Generating Sources.

1.2 Application. The handbook has been prepared for use by all Departments and Agencies of the DoD in selecting engine-driven generator sets and ancillary equipment for applications requiring mobile sources of electric power and to assist the Project Manager, Mobile Electric Power (PM-MEP) in effecting management and standardization of such sources of power within the DoD. The engine-driven generator sets listed herein are the only mobile sets authorized for procurement. DoD components with mobile electric power requirements within the range of 0.5 kW through 750 kW, whose needs cannot be satisfied by one of the listed generator sets, must obtain deviation approval from the Project Manager before taking any procurement action. Special instructions on the preparation and submittal of deviations are contained in the Logistics Joint Operating Procedures AR 700-101, AFJI 63-110, NAVFACINST 4120.12, MCO 11310.8C/DLAR 4120.7 titled Management and Standardization of Mobile Electric Power Generating Sources.

2. APPLICABLE DOCUMENTS

2.1 General. The documents listed below are not necessarily all of the documents referenced herein, but are the ones necessary to understand the information provided by this handbook.

2.2 Government documents.

2.2.1 Specifications and standards. The following specifications and standards form a part of this document to the extent referenced herein. Unless otherwise specified, the issues of these documents are those listed in the latest issue of the Defense Index of Specifications and Standards (DoDISS) and supplemented thereto.

SPECIFICATIONS

DEPARTMENT OF DEFENSE

MIL-T-704	-	Treatment and Painting of Materiel
MIL-C-22992	-	Connector, Plugs and Receptacles, Electrical, Waterproof, Quick Disconnect Heavy Duty Type, General Specification For

STANDARDS

DEPARTMENT OF DEFENSE

MIL-STD-461	-	Electromagnetic Interference
MIL-STD-705	-	Generator Sets, Engine-Driven, Methods of Tests and Instructions
MIL-STD-1332	-	Definitions of Tactical, Prime, Precise, and Utility Terminologies for Classification of the DoD Mobile Electric Generator Set Family

(Unless otherwise indicated, copies of the above specifications and standards are available from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

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2.2.2 Other Government publications. The following other Government publication forms a part of this document to the extent specified herein.

FM 20-31

- Electric Power Generation in the Field

(copies of the above document are available from the US Army Publications and Printing Command, ATTN: ASQZ-IM, 2461 Eisenhower Ave., Alexandria, VA 22331-0203. A valid publications account is required.)

3. DEFINITIONS

3.1 General. The following acronyms and definitions are used in this handbook.

3.2 Acronyms used in this handbook. The acronyms used in this handbook are defined as follows:

a. ABCA - American, British, Canadian, Australian (Quadripartite subset of NATO).

b. DED - Diesel Engine Driven.

c. DoD - Department of Defense.

d. DSN - Defense Switched Network (formerly AUTOVON). A military telephone system.

e. GED - Gasoline Engine Driven.

f. GS - General Support

g. GTED - Gas Turbine Engine Driven.

h. JEDMICS - Joint Engineering Data and Management Information Control System. A DoD drawing and engineering data management control system.

i. LIN - Line Item Number. A six character identifier of a generic nomenclature, where the generic nomenclature is the family name of an item or group of items whose physical traits and functional abilities are sufficiently alike to be issued to meet the same operational requirements. A LIN generally includes several National Stock Numbers.

j. NATO - North Atlantic Treaty Organization.

k. NSN - National Stock Number. A unique identifier for stocking an item.

l. OEM - On Equipment Material.

m. PICA - Primary Inventory Control Activity. See 3.21

n. PU/PP - Power Unit/Power Plant. See 3.19 and 3.20.

o. RMS - Root Mean Square.

p. SSN - Standard Study Number. A federal budget identifier for procuring an item.

q. STANAG - Standardization Agreement (of NATO).

r. QSTAG - Quadripartite Standardization Agreement (of ABCA).

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3.3 Accessory box. An accessory box is an aluminum or steel box mounted to the PU/PP trailer which contains items necessary for the set-up, operation, or maintenance of the unit. These items include: ground rods, a sledge hammer or ground rod driver/puller, technical manuals and fuel can adapters, which are referred to as ancillary equipment.

3.4 Bandwidth. Bandwidth is the distance between two lines drawn parallel to the axis of chart movement, one each passing through the center points of maximum and minimum trace excursion respectively during any steady-state electrical load condition. Bandwidth may refer to voltage, frequency or speed and is expressed as a percentage of rated voltage, frequency or speed.

3.5 Camouflage pattern. A three color pattern designed to disrupt the silhouette or outline of a piece of equipment making it difficult to distinguish the equipment from its surroundings.

3.6 Classification. See MIL-STD-1332 for classification of sets as to type, class, and mode.

3.7 Deviation Factor. The deviation factor of a voltage waveform is the ratio of the maximum difference between corresponding ordinates of the voltage waveform and of the equivalent sine wave to the maximum ordinate of the equivalent sine wave when the waves are superimposed in such a way as to make this maximum difference as small as possible.

3.8 Dip. Voltage dip is the decrease in voltage resulting from sudden application of load to a generator set. It is measured from the mean of the observed steady-state voltage band prior to the load change to the minimum voltage excursion. Voltage dip includes the effects of voltage regulation, whereas undershoot does not.

3.9 Electromagnetic Interference (EMI): MEPGS are tested to comply with MIL-STD-461 for conducted and radiated emissions and conducted and radiated susceptibility.

3.10 Failure. The inability of an item to perform within previously specified limits.

3.10.1 Relevant Failure. A relevant failure is any malfunction the operator cannot remedy by normal adjustment action using the set controls and OEM equipment and which causes or may cause any or all of the following: Inability to commence operation, cessation of operation or degradation of performance capability of the system/subsystem below designated levels, serious damage to system/subsystem by continued operation; or create serious personnel hazard.

3.10.2 Non-relevant Failures. Any failure not used to compute set/unit reliability such as:

- a. Failures which do not prevent the set/unit from meeting the specified power output requirement, e.g., a panel light burns out.
- b. Failures caused by operator error where proper procedures are documented in technical manuals, instruction plates mounted on the set/unit or both; e.g., use of improper lubricant.
- c. Secondary failures caused by failures in the powered equipment or other occurrences in the environment when integral protection is not provided against such equipment failure or occurrence, e.g., explosion or fire.
- d. Failures which may be corrected by normal operator functions, e.g., readjustment of voltage after the 4-hour long-term stability period.

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e. Failures because of characteristics of the load, e.g., waveform distortion caused by saturated inductors.

f. Failures because of design deficiencies when subsequent testing demonstrates that the design deficiency has been corrected.

g. Secondary failures caused by primary failure because of a design deficiency when subsequent testing demonstrates that the design deficiency has been corrected.

h. Failures resulting from operating items beyond requirements, e.g., if ball joints scheduled for replacement at 2500 hours are run to failure to determine mean life, failures after 2500 hours are non-relevant failures.

3.11 Harmonic. A harmonic is a component of a periodic quantity which is an integral multiple of the fundamental frequency. For example, a component of frequency which is twice the fundamental frequency is called the second harmonic. For an AC generator set, the magnitudes (in percent of fundamental component amplitude) of any harmonics present may not exceed the "individual harmonic" value specified for the set.

3.12 Hertz. Hertz (Hz) is the international unit of frequency now recognized instead of cycles per second.

3.13 Mean Time Between Failure (MTBF). For exponentially distributed failures, the Mean Time Between Failure (MTBF) is the reciprocal of the failure rate. Observed MTBF is equal to the total operating time of the equipment divided by the number of relevant failures. Observed MTBF is a point estimate.

3.13.1. Specified MTBF. That value of MTBF which describes the reliability objective of the equipment

3.13.2. Minimum Acceptable MTBF. That value of MTBF which describes the lower bound reliability objective of a reliability acceptance test of the equipment. Generally it is equal to one half of the specified MTBF but is test plan dependent.

3.13.3. Mean Time Between Operational Mission Failures (MTBOMF). That value of MTBF observed in an operational (tactical) environment as opposed to the laboratory tested value. Generally derived from user testing.

3.14 Mobile Electric Power Generating Sources (MEPGS). All mobile, electric power generating sources, 750-kilowatt (kW) and smaller, which are skid mounted, wheel mounted, or man-portable that are complete equipment assemblages or part of an assemblage, and that are capable of independently producing electric power when operating on diesel, gasoline, or other fuel from integral or remotely located fuel sources. Included are follow-on power sources; e.g., fuel cells and thermo-electric devices. (Fuel cells and thermoelectric devices less than 0.5-kW rating and electrochemical batteries are not included.)

3.15 Observed Steady-State Band. The observed steady-state band is the actual bandwidth determined by test of the voltage, frequency or speed. The observed steady-state band is differentiated from the prescribed steady-state band in that the prescribed steady-state band is the maximum bandwidth permitted by the specification.

3.16 Overshoot. Overshoot is the surge increase in speed, frequency or voltage above the mean of the observed steady-state band resulting from a sudden decrease in electrical load on a generator set. Overshoot is specified as a percentage of the rated speed, frequency or voltage.

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3.17 Paralleling. The electrical connection of two or more electrical power generating sources in order to meet a power demand greater than that supplied by any single unit.

3.18 Phase Balance Voltage. Phase balance voltage is the difference in percent of voltage between the phases of a poly-phase generator set when the set is operating at rated voltage, rated frequency, and no load.

3.19 Power Plant (PP). A trailer mounted generator set configuration consisting of two generator sets, one or two trailers, a switch box and usually an accessory box (with hammer, ground rods, and puller) and a fire extinguisher on each trailer. Details provided in Characteristics Sheet.

3.20 Power Unit (PU). A trailer mounted generator set configuration consisting of one generator set, one trailer and usually an accessory box (with hammer, ground rods, and puller) and a fire extinguisher. Details provided in Characteristics Sheet.

3.21 Primary Inventory Control Activity (PICA). The activity within DoD designated as responsible for the functions of procurement, cataloging, depot maintenance, and disposal on an item basis.

3.22 Rated load. The condition resulting when a generator set is operating at rated frequency, rated voltage, rated current, and rated power factor as specified on the generator name plate. It is normally stated as a given kilowatt value at a given power factor.

3.23 Reconnectable. A reconnectable generator set has provisions for reconnecting the generator phase windings from single phase to three phase and from low voltage to high voltage depending on the size and type of generator set.

3.24 Recovery Time. Recovery time is the elapsed time from the time the frequency trace leaves the prescribed steady-state band until the trace returns to and remains within the prescribed steady-state band as a result of a load change. The same definition applies to voltage and frequency recovery time.

3.25 Regulation. Frequency regulation is the maximum difference between the no-load value of frequency, and the value at any load up to and including rated load. This difference is expressed as percentage of the rated frequency. The voltage regulation is expressed similarly except that the Root Mean Square (RMS) value of voltage is used.

3.26 Ripple Voltage. Ripple voltage is the alternating component in the output voltage of a DC generator.

3.27 Rise. Voltage rise is the surge in voltage resulting from sudden removal of load from a generator set. It is measured from the mean of the observed steady-state voltage band prior to the load change to maximum voltage excursion. Voltage rise includes the effects of voltage regulation, whereas overshoot does not.

3.28 Stability. Frequency stability describes the tendency of the frequency to remain at a constant value. Generally, the instantaneous value of frequency is not constant but varies randomly above and below a mean value. Stability may be described as either short-term or long term depending upon the length of time that the frequency is observed. Another term, bandwidth, describes the limits of these variations. Voltage stability is described similarly.

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3.29 Steady-State. Steady-state is the operating condition, at constant load, after transients have settled out.

3.30 Type Classified for Army Use. Type Classification (TC) is a process by which the Army identifies the degree of acceptability of a material item for Army use. The TC is the Army's implementation of the DoD requirement that an item is "approved for service use" before expending procurement funds. The types of classification categories are: Limited Procurement (LP), Standard (STD), Generic (G), Contingency (CON) and Obsolete (O).

3.31 Undershoot. Undershoot is the surge decrease in speed, frequency, or voltage below the mean of the observed steady-state band resulting from a sudden increase in electrical load on a generator set. Undershoot is specified as a percentage of the rated speed, frequency, or voltage.

3.32 Voltage Modulation: The peak value of a voltage waveform may vary with time. Voltage modulation is the difference in the absolute value of the peak voltage readings stated as a percentage of average absolute peak voltage (RMS voltage $\times \sqrt{2}$).

4. GENERAL REQUIREMENTS

4.1 Safety.

4.1.1 Grounding. Electrical power generating and distribution systems must be properly grounded to prevent hazards to operators and using personnel. Techniques for grounding power generating systems are included in FM 20-31, Electric Power Generation in the Field. A three-piece sectional ground rod is available in the DoD supply system that can be used to obtain an adequate ground under most soil conditions.

4.1.2 Fire Protection. Adequate fire protection must be provided in the area in which the generator set will be used. Fire extinguisher, NSN: 4210-00-270-4512, is recommended.

4.1.3 Noise Protection. Adequate hearing protection must be utilized in the vicinity of most operating generator sets. Prolonged exposure to the high intensity noise produced by some operating generator sets can cause permanent hearing damage or complete loss of hearing. Operation of the TQG and other quiet generators does not require hearing protection as long as the acoustic covers are not opened or removed.

4.2 Delivered condition. Details of delivered condition, operating supplies, optional equipment, and accessories are contained in the applicable Appendix. Trailer mounted configurations are delivered with more accessories including the fire extinguisher and an additional set of ground rods.

4.2.1 Camouflage Patterns. Most items covered by this handbook are delivered with either a three color (green, brown, black) camouflage pattern or painted desert sand, as required. Some exceptions exist and some items may be painted a solid green while other items may be painted flight line yellow.

4.2.2 Chemical Agent Resistant Coating (CARC). Chemical Agent Resistant Coating (CARC), applied in accordance with MIL-T-704, is the finish now required for all Army equipment. CARC, a polyurethane finish, is designed to be resistant to Nuclear, Biological, and Chemical (NBC) agents and allow easy clean up and decontamination. In addition, CARC will not be affected by the chemical agent decontamination chemicals which would remove most other paints.

4.2.3 Skid sets.

a. Safety Items. Production generator sets may or may not be delivered with fire extinguishers, ground rods or ground rod slide hammer/puller. Units

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may obtain a 5 pound carbon dioxide fire extinguisher (NSN 4210-00-270-4512), 3-foot-sections of ground rod (NSN 5975-00-878-3791) and a ground rod slide hammer/puller (NSN 5120-01-013-1676).

b. Batteries. All 5 kW through 750 kW generator sets (except the 10 kW TQG) are furnished with dry charged batteries less electrolyte. Electrolyte is identified as NSN 6810-00-249-9354 (1 gallon containers) or NSN 6810-00-893-8138 (15 gallon containers). The 10 kW TQG is supplied with two 12V alkaline batteries.

c. Auxiliary Fuel Line. A 25 foot auxiliary fuel line is furnished with the 5 kW through 200 kW diesel engine driven generator sets. Fuel lines for the other sets may be ordered or fabricated on site in accordance with drawing 69-668, titled, Auxiliary Fuel Line, available in the DoD automated drawing system (JEDMICS) or from USA CECOM, ATTN: AMSEL-LC-IEW-D-PG, 10115 Gridley Road, Suite 228, Fort Belvoir, VA 22060-5849.

d. Ether starting aid. The 15 kW through 200 kW diesel engine driven generator sets are equipped with an internal ether starting aid for temperatures below 40 °F. Ether bottles may be obtained as NSN 2910-00-209-4997.

e. Paralleling cables. Class 1 (precise) sets are supplied with a paralleling cable for interconnection of the voltage regulators and governor systems of the sets to be paralleled. The 15 through 750 kW generator sets are designed for parallel operation as well as single set operation. Additional details on parallel operation are contained in the generator set manuals.

f. Power output terminals. Power output terminals consist of split-lug terminals with captive nuts. A series of standard power output receptacles (MIL-C-22992) are available through the supply system. The Power Distribution and Illumination System, Electrical (PDISE) interfaces to the power output terminals via a pigtail connection. The old 15-200 kW DED generator sets have two (2) panels that can use for mounting the standard receptacles needed by the user. In addition, the US Army Missile Command (MICOM) has cognizance for a series of missile system receptacles for the 15 kW through 60 kW DED generator sets.

4.2.4 Trailer mounted sets. The trailer mounted sets (Power Units and Power Plants) are delivered with one or more fire extinguishers, ground rods, ground rod driver/puller, and 8 pound hammer. Details have been included in the appropriate APPENDICES.

5. DETAILED REQUIREMENTS.

5.1 Characteristics Data Sheets. Detailed data on DoD standard family engine generator sets and associated items are contained in the Characteristics Data Sheets of APPENDICES A through E.

5.1.1 Item Description. Data contained in the sheets provide adequate physical description and performance characteristics to permit selection of the item best suited for a specific application. Maximum wet weights are cited in the data sheets unless otherwise noted. In addition, photographs and outlined drawings are included to facilitate application planning.

5.1.2 Parametric Values. The Parametric values cited within these data sheets are the maximum allowable limits over the specified environmental range. Specified parametric values were determined using the test procedures delineated in MIL-STD-705, Generator Sets, Engine-Driven, Methods of Tests and Instructions. For a more complete description, see applicable specifications, drawings, and referenced documents.

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6. NOTES

6.1 National Stock Numbers. National Stock Numbers for mobile electric power generator sets and associated equipment are provided in Tables: A-I, B-I, C-I, D-I and E-I, and in the characteristics data sheets.

6.2 MEPGS Program Status. Current information on the DoD MEPGS program is available on the World Wide Web (WWW). Search the WWW for "Mobile Electric Power" using any of the available search engines. The DoD Project Manager, Mobile Electric Power (PM-MEP) will usually be at the top of the list. To determine the availability of desired generator sets or associated equipment and to assure proper and timely acquisition of MEPGS, users of this handbook are advised to contact PM MEP at:

DoD Project Manager - Mobile Electric Power
7798 Cissna Road
Springfield, Virginia 22150-3199

Phone: (703)806-7823, DSN: 656-7823; Fax: (703)806-7004
email: PM-MEP@EMH10.BELVOIR.ARMY.MIL

6.3 Mobile Electric Power Generating Source Development Program. A Mobile Electric Power Generating Source (MEPGS) development program is monitored by the DoD Project Manager - Mobile Electric Power. If users of this handbook cannot find a suitable generator set within the DoD Mobile Electric Power Engine-Driven Generator Standard Family as presented in this Handbook, they are advised to contact the Project Manager (see Para 6.2) to obtain status of the development program.

6.4 International Standardization Agreement. Certain power generation characteristics are the subject of international standardization agreements: ABCA QSTAG 298, ABCA QSTAG 299, NATO STANAG 4134, and NATO STANAG 4135. When change notice, revision, or cancellation of this document is proposed which will affect or violate the international agreements concerned, the preparing activity shall take appropriate reconciliation action through international standardization channels, including departmental standardization offices, if required.

6.5 Items not Army Type-Classified. Army Type-Classification (see 3.30) is a procedure described by AR 70-1 to designate Army materiel acquisition status. Some mobile electric power generating sources included in this document have not been Type-Classified for Army use and are identified by "Not Type-Classified for Army Use". These items have been approved for use by another service. Other items, such as the APUs, have been Army type-classified as part of a larger system and are not separately fielded. These items have been identified by "Not Separately Type-Classified".

6.6 Cross reference. Table I provides a cross reference of the figure numbers to the model number, NSN, LIN, SSN, and page number. Table II provides a list of model numbers arranged in alpha-numeric order.

6.7 Subject term (key word) listing.

Electric
Generator
Generator set
Mobile Electric Power
Power Plant
Power Unit
Auxiliary Power
Power Distribution
Ground Power Unit

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6.8 Changes from previous issues. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes. Description of changes are described in the Foreword, paragraph 4.

Custodians:

Army - CR4
Navy - YD1
Air Force - 99

Preparing Activity:

Army - CR4

Review Activities:

Army - CE, MI
Navy - AS, EC, MC
Air Force - 11
DLA - GS

Project No. 6115-0740

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TABLE I. Cross reference

FIG	MODEL NO.	LIN	NSN	SSN	PAGE
A-1	MEP-501A	Z31872	6115-01-435-1567	M59400	19
	MEP-531A	G36237	6115-01-435-1565	M59300	
A-2	MEP-831A	G18358	6115-01-285-3012	M58100	21
	MEP-832A	G74847	6115-01-287-2431	M53600	
A-3	PP-AN/MJQ-42	Z13645	6115-01-322-8583	M50600	23
A-4	PP-AN/MJQ-43	Z13713	6115-01-322-8582	M54800	24
A-5	MEP-802A	G11966	6115-01-274-7387	M53500	25
	MEP-812A	G12102	6115-01-274-7391	M518	
A-6	PU-797	G42238	6115-01-332-0741	R62700	27
	PU-797A	G42238	6115-01-413-3820	R62700	
A-7	PP-AN/MJQ-35	P28083	6115-01-313-4216	M54100	28
	PP-AN/MJQ-35A	P28083	6115-01-414-9697	M54100	
A-8	PP-AN/MJQ-36	P28151	6115-01-313-4215	M66200	29
A-9	MEP-803A	G74711	6115-01-275-5061	M52900	30
	MEP-813A	G74779	6115-01-274-7392	M56500	
A-10	PU-798	G42170	6115-01-319-9032	R59100	32
	PU-798A	G42170	6115-01-413-3818	R59100	
A-11	PU-799	G53403	6115-01-313-4283	M57000	33
	PU-799A	G53403	6115-01-413-3819	M57000	
A-12	PP-AN/MJQ-37	P42262	6115-01-299-6035	R59000	34
A-13	PP-AN/MJQ-38	P42330	6115-01-313-4214	M52300	35
A-14	MEP-804A	G12170	6115-01-274-7388	M52600	36
	MEP-814A	G12238	6115-01-274-7393	M549	
A-15	PU-800	G78203	6115-01-317-2137	M52100	38
A-16	PU-801	G78374	6115-01-319-9033	M500	39
	PU-801A	G78374	6115-01-413-3821	M500	
A-17	PU-802	G53778	6115-01-317-2138	M50000	40
A-18	PP-AN/MJQ-39	P42614	6115-01-299-6034	M56300	41
A-19	MEP-805A	G74575	6115-01-274-7389	M532	42
	MEP-815A	G74643	6115-01-274-7394	M50100	
A-20	PU-803	G35851	6115-01-317-2136	M54300	44
A-21	PU-804	G35919	6115-01-317-2135	M59500	45
A-22	PP-AN/MJQ-40	P42126	6115-01-299-6033	M51900	46
A-23	MEP-806A	G12034	6115-01-274-7390	M53400	47
	MEP-816A	G18052	6115-01-274-7395	M53100	
A-24	PU-805	G78306	6115-01-317-2134	M50900	49
A-25	PU-806	G17460	6115-01-317-2133	M51000	50
A-26	PP-AN/MJQ-41	P42194	6115-01-303-7896	M51100	51
A-27	PP-AN/MJQ-1610		6115-01-XXX-XXXX	M510	52
A-28	PP-AN/MJQ-1612		6115-01-349-1536	M510	53
A-29	MEP-808A		6115-01-296-1463		54
	MEP-818A		6115-01-XXX-XXXX		
A-30	MEP-809A		6115-01-296-1462		55
A-31	LARGE PRIME SET		6115-01-XXX-XXXX		56
B-1	MEP-952		6115-01-317-2139		59
B-2	MEP-903A	B16126	6115-01-431-3062	BZ9962	61
C-1	MEP-362A	G38140	6115-01-161-3992	R607	65
C-2	MEP-356A		6115-00-420-8486		67
C-3	MEP-357A		6115-00-110-1859		69

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TABLE I - Cross Reference - continued

FIG	MODEL NO.	LIN	NSN	SSN	PAGE
D-1	M200 M200 A/P	F55689 F55689	6150-01-208-9755 6150-01-308-5672	R45500 R45500	75
D-2	M100 M100 A/P	F55621 F55621	6150-01-208-9754 6150-01-308-5671	R45400 R45400	76
D-3	M40 M40 A/P	F55485 F55485	6150-01-208-9753 6150-01-307-9446	R45300 R45300	77
D-4	M60 M60 A/P	F55553 F55553	6150-01-307-9445 6150-01-208-9752	R45200 R45200	78
D-5	M46	U89185	6150-01-208-9751	R62800	79
E-1	MEP-019A	J43027	6115-00-940-7862		92
E-2	MEP-015A MEP-025A	J43918 J44056	6115-00-889-1446 6115-00-017-8236	M550 M513	94
E-3	MEP-016A MEP-016C MEP-021A MEP-021C MEP-026A MEP-026C	J45699 J45699 J45836 J45836 J46110 J46110	6115-00-017-8237 6115-01-143-3311 6115-00-017-8238 6115-01-175-7321 6115-00-017-8239 6115-01-175-7320	M53601 M516 M516	96
E-4	MEP-016B MEP-701A	G54041 G54041	6115-01-150-4140 6115-01-234-5966	M581 M581	98
E-5	PP-AN/MJQ-32	M54800	6115-01-280-2300	M548	100
E-6	PP-AN/MJQ-33	M50600	6115-01-280-2301	M506	101
E-7	MEP-017A MEP-022A	J47068 J48713	6115-00-017-8240 6115-00-017-8241	M518	102
E-8	MEP-002A	J35813	6115-00-465-1044	M535	104
E-9	PU-751/M	G37273	6115-00-033-1373	M565	106
E-10	AN/MJQ-16	P41832	6115-00-033-1395	M538	107
E-11	MEP-003A MEP-112A	J35825 G35981	6115-00-465-1030 6115-00-465-1027	M529 M565	108
E-12	PU-753/M	G40744	6115-00-033-1389	M567	110
E-13	AN/MJQ-18	P28015	6115-00-033-1398	M540	111
E-14	AN/MJQ-25	P42364	6115-01-153-7742	M523	112
E-15	MEP-018A MEP-023A	J49398 J49466	6115-00-889-1447 6115-00-926-0843		113
E-16	MEP-004A MEP-013A	J35835 J36006	6115-00-118-1241 6115-00-118-1244	M549 M526	115
E-17	PU-405A/M	J35492	6115-00-394-9577	M500	117
E-18	PU-732/M	G36074	6115-00-260-3082	M521	118
E-19	AN/MJQ-15	P28075	6115-00-400-7591	M563	119
E-20	MEP-005A MEP-114A	J36109 J36725	6115-00-118-1240 6115-00-118-1248	M532 M501	120
E-21	PU-406B/M	J36383	6115-00-394-9576	M543	122
E-22	PU-760/M	G53871	6115-00-394-9581	M595	123
E-23	AN/MJQ-10A	P27819	6115-00-394-9582	M519	124
E-24	MEP-006A MEP-115A	J38301 J38506	6115-00-118-1243 6115-00-118-1253	M531/M534	125
E-25	PU-650B/G	J35692	6115-00-258-1622	M509	127
E-26	PU-707A/M	J35680	6115-00-394-9573	M510	128
E-27	AN/MJQ-12A	P27823	6115-00-257-1602	M511	129
E-28	MEP-007B	J38712	6115-01-036-6374	M54400	130

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TABLE I - Cross Reference - continued

FIG	MODEL NO.	LIN	NSN	SSN	PAGE
E-30	MEP-108A MEP-009A	J40150 J40158	6115-00-935-8729 6115-00-133-9104	M504 M504	133
E-31	MEP-009B	J40158	6115-01-021-4096	M50400	135
E-32	AN/MJQ-11A	P27821	6115-00-394-9583	M527	137
E-33	MEP-029A	G40424	6115-01-030-6085	M57700	138
E-34	MEP-012A	J	6115-01-143-3850	M	140
E-35	MEP-208A	J30093	6115-00-450-5881	M56400	142

TABLE II. Model number list

MODEL NO.	ITEM DESCRIPTION	NSN	FIG
M100	100 amp/phase Feeder Sys, 3 Phase-DEPMED	6150-01-208-9754	D-2
M100 A/P	100 amp/phase Feeder Sys - 3 Phase	6150-01-308-5671	D-2
M200	200 amp/phase Feeder Sys, 3 Phase-DEPMED	6150-01-208-9755	D-1
M200 A/P	200 amp/phase Feeder Sys - 3 Phase	6150-01-308-5672	D-1
M40	40 amp/phase Dist Sys - 3 Phase-DEPMED	6150-01-208-9753	D-3
M40 A/P	40 amp/phase Dist Sys - 3 Phase	6150-01-307-9446	D-3
M46	Electrical Kit, Utility Receptacle	6150-01-208-9751	D-5
M60	60 amp Dist Sys - 1 Phase	6150-01-307-9445	D-4
M60 A/P	60 amp Dist Sys - 1 Phase-DEPMED	6150-01-208-9752	D-4
MEP-002A	5 kW, 60 Hz, DED, TU	6115-00-465-1044	E-8
MEP-003A	10 kW, 60 Hz, DED, TU	6115-00-465-1030	E-11
MEP-004A	15 kW, 50/60 Hz, DED, TU	6115-00-118-1241	E-16
MEP-005A	30 kW, 50/60 Hz, DED, TU	6115-00-118-1240	E-20
MEP-006A	60 kW, 50/60 Hz, DED, TU	6115-00-118-1243	E-24
MEP-007B	100 kW, 50/60 Hz, DED, TU	6115-01-036-6374	E-28
MEP-009A	200 kW, 50/60 Hz, DED, TU	6115-00-133-9104	E-30
MEP-009B	200 kW, 50/60 Hz, DED, TU	6115-01-021-4096	E-31
MEP-012A	750 kW, 50/60 Hz, DED, PU	6115-01-143-3850	E-34
MEP-013A	15 kW, 400 Hz, DED, TP	6115-00-118-1244	E-16
MEP-015A	1.5 kW, 60 Hz, GED, TU unmod	6115-00-889-1446	E-2
MEP-016A	3 kW, 60 Hz, GED unmodified	6115-00-017-8237	E-3
MEP-016B	3 kW, 60 Hz, DED, TU, wo/ASK	6115-01-150-4140	E-4
MEP-016C	3 kW, 60 Hz, GED, mod	6115-01-143-3311	E-3
MEP-017A	5 kW, 60 Hz, GED, TU	6115-00-017-8240	E-7
MEP-018A	10 kW, 60 Hz, GED, TU	6115-00-889-1447	E-15
MEP-019A	0.5 kW, 400 Hz, GED, TU unmod	6115-00-940-7862	E-1
MEP-021A	3 kW, 400 Hz, GED, TU unmod	6115-00-017-8238	E-3
MEP-021C	3 kW, 400 Hz, GED, TU mod	6115-01-175-7321	E-3
MEP-022A	5 kW, 400 Hz, GED, TU	6115-00-017-8241	E-7
MEP-023A	10 kW, 400 Hz, GED, TU	6115-00-926-0843	E-15
MEP-025A	1.5 kW, 28 VDC, GED, TU unmod	6115-00-017-8236	E-2
MEP-026A	3 kW, 28 VDC, GED, TU unmod	6115-00-017-8239	E-3

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TABLE II. Model number list - continued

MODEL NO.	ITEM DESCRIPTION	NSN	FIG
MEP-026C	3 kW, 28 VDC, GED, TU mod	6115-01-175-7320	E-3
MEP-029A	500 kW, 50/60 Hz, DED, TU	6115-01-030-6085	E-33
MEP-108A	200 kW, 50/60 Hz, DED, TP	6115-00-935-8729	E-30
MEP-112A	10 kW, 400 Hz, DED, TU	6115-00-465-1027	E-11
MEP-114A	30 kW, 400 Hz, DED, TP	6115-00-118-1248	E-20
MEP-115A	60 kW, 400 Hz, DED, TP	6115-00-118-1253	E-24
MEP-208A	750 kW, 50/60 Hz, DED, PU	6115-00-450-5881	E-35
MEP-356A	60 kW, 400 Hz; 2kW, 28VDC; Pneumatic, Self Propelled, GTE, Aviation Ground Power Unit	6115-00-420-8486	C-2
MEP-357A	72 kW, 400 Hz; 21kW, 28VDC; Self Propelled, DED, Aviation Support Unit	6115-00-110-1859	C-3
MEP-362A	10 kW, 28VDC, GTE, Aircraft Support Unit, Integral wheel mount	6115-01-161-3992	C-1
MEP-501A	2 kW, 28 VDC, DED	6115-01-435-1567	A-1
MEP-531A	2 kW, 60 Hz, DED	6115-01-435-1565	A-1
MEP-701A	3 kW, 60 Hz, DED w/ASK	6115-01-234-5966	E-4
MEP-802A	5 kW, 60 Hz, DED TQG	6115-01-274-7387	A-5
MEP-803A	10 kW, 60 Hz, DED TQG	6115-01-275-5061	A-9
MEP-804A	15 kW, 50/60 Hz, DED TQG	6115-01-274-7388	A-14
MEP-805A	30 kW, 50/60 Hz, DED TQG	6115-01-274-7389	A-19
MEP-806A	60 kW, 50/60 Hz, DED TQG	6115-01-274-7390	A-23
MEP-808A	100 kW, 50/60 Hz, DED TQG	6115-01-296-1463	A-29
MEP-809A	200 kW, 50/60 Hz, DED TQG	6115-01-296-1462	A-30
MEP-812A	5 kW, 400 Hz, DED TQG	6115-01-274-7391	A-5
MEP-813A	10 kW, 400 Hz, DED TQG	6115-01-274-7392	A-9
MEP-814A	15 kW, 400 Hz, DED TQG	6115-01-274-7393	A-14
MEP-815A	30 kW, 400 Hz, DED TQG	6115-01-274-7394	A-19
MEP-816A	60 kW, 400 Hz, DED TQG	6115-01-274-7395	A-23
MEP-818A	100 kW, 400 Hz, DED TQG	6115-01-	A-29
MEP-831A	3 kW, 60 Hz, DED TQG	6115-01-285-3012	A-2
MEP-832A	3 kW, 400 Hz, DED, TQG	6115-01-287-2431	A-2
MEP-903A	10 kW, 60 Hz, DED/APU	6115-01-431-3062	B-2
MEP-952	5 kW, 28 VDC, DED/APU	6115-01-317-2139	B-1
MEP-TBD	LARGE PRIME POWER SET	6115-01-	A-31
PP-AN/MJQ-10A	Power Plant, DED, 30 kW, 50/60 Hz TRLMTD	6115-00-394-9582	E-23
PP-AN/MJQ-11A	PP, DED, 200 kW, 50/60 Hz, TRLMTD	6115-00-394-9583	E-32
PP-AN/MJQ-12A	PP, DED, 60 kW, 50/60 Hz TRLMTD	6115-00-257-1602	E-27
PP-AN/MJQ-15	PP, DED, 15 kW, 400 Hz TRLMTD	6115-00-400-7591	E-19
PP-AN/MJQ-16	PP, DED, 5 kW, 60 Hz TRLMTD	6115-00-033-1395	E-10
PP-AN/MJQ-1610	PP, TQG, 60 kW, 400 Hz, TRLMTD	6115-01-	A-27
PP-AN/MJQ-1612	PP, TQG, 60 kW, 50/60 Hz, TRLMTD	6115-01-349-1536	A-28
PP-AN/MJQ-18	PP, DED, 10 kW, 60 Hz TRLMTD	6115-00-033-1398	E-13
PP-AN/MJQ-25	PP, DED, 10 kW, 400 Hz TRLMTD	6115-01-153-7742	E-14
PP-AN/MJQ-32	PP, DED, 3 kW, 60 Hz TRLMTD	6115-01-280-2300	E-5

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TABLE II. Model number list - continued

MODEL NO.	ITEM DESCRIPTION	NSN	FIG
PP-AN/MJQ-33	PP, DED, 3 kW, 60 Hz TRLMTD	6115-01-280-2301	E-6
PP-AN/MJQ-35	PP, TQG, 5 kW, 60 Hz TRLMTD	6115-01-313-4216	A-7
PP-AN/MJQ-35A	PP, TQG, 5 kW, 60 Hz TRLMTD	6115-01-414-9697	A-7
PP-AN/MJQ-36	PP, TQG, 5 kW, 60 Hz TRLMTD	6115-01-313-4215	A-8
PP-AN/MJQ-37	PP, TQG, 10 kW, 60 Hz TRLMTD	6115-01-299-6035	A-12
PP-AN/MJQ-38	PP, TQG, 10 kW, 400 Hz TRLMTD	6115-01-313-4214	A-13
PP-AN/MJQ-39	PP, TQG, 15 kW, 400 Hz TRLMTD	6115-01-299-6034	A-18
PP-AN/MJQ-40	PP, TQG, 30 kW, 50/60 Hz TRLMTD	6115-01-299-6033	A-22
PP-AN/MJQ-41	PP, TQG, 60 kW, 50/60 Hz TRLMTD	6115-01-303-7896	A-26
PP-AN/MJQ-42	PP, TQG, 3 kW, 60 Hz TRLMTD	6115-01-322-8583	A-3
PP-AN/MJQ-43	PP, TQG, 3 kW, 60 Hz TRLMTD	6115-01-322-8582	A-4
PU-405A/M	Gen Set, DED, 15 kW, 50/60 Hz, TRLMTD	6115-00-394-9577	E-17
PU-406B/M	Gen Set, DED, 30 kW, 50/60 Hz, TRLMTD	6115-00-394-9576	E-21
PU-495B/G	Gen Set, DED, 100 kW, 50/60 Hz, TRLMTD	6115-01-134-0165	E-29
PU-650B/G	Gen Set, DED, 60 kW, 50/60 Hz, TRLMTD	6115-00-258-1622	E-25
PU-707A/M	Gen Set, DED, 60 kW, 400 Hz, TRLMTD	6115-00-394-9573	E-26
PU-732/M	Gen Set, DED, 15 kW, 400 Hz, TRLMTD	6115-00-260-3082	E-18
PU-751/M	Gen Set, DED, 5 kW, 60 Hz, TRLMTD	6115-00-033-1373	E-9
PU-753/M	Gen Set, DED, 10 kW, 60 Hz, TRLMTD	6115-00-033-1389	E-12
PU-760/M	Gen Set, DED, 30 kW, 400 Hz, TRLMTD	6115-00-394-9581	E-22
PU-797	Generator Set, TQG, 5 kW, 60 Hz, TRLMTD	6115-01-332-0741	A-6
PU-797A	Gen Set, TQG, 5 kW, 60 Hz, TRLMTD	6115-01-413-3820	A-6
PU-798	Gen Set, TQG, 10 kW, 60 Hz, TRLMTD	6115-01-319-9032	A-10
PU-798A	Gen Set, TQG, 10 kW, 60 Hz, TRLMTD	6115-01-413-3818	A-10
PU-799	Gene Set, TQG, 10 kW, 400 Hz, TRLMTD	6115-01-313-4283	A-11
PU-799A	Gen Set, TQG, 10 kW, 400 Hz, TRLMTD	6115-01-413-3819	A-11
PU-800	Gen Set, TQG, 15 kW, 400 Hz, TRLMTD	6115-01-317-2137	A-15
PU-801	Gen Set, TQG, 15 kW, 50/60 Hz, TRLMTD	6115-01-319-9033	A-16
PU-801A	Gen Set, TQG, 15 kW, 50/60 Hz, TRLMTD	6115-01-413-3821	A-16
PU-802	Gen Set, TQG, 15 kW, 50/60 Hz, TRLMTD	6115-01-317-2138	A-17
PU-803	Gen Set, TQG, 30 kW, 50/60 Hz, TRLMTD	6115-01-317-2136	A-20
PU-804	Gen Set, TQG, 30 kW, 400 Hz, TRLMTD	6115-01-317-2135	A-21
PU-805	Gen Set, TQG, 60 kW, 50/60 Hz, TRLMTD	6115-01-317-2134	A-24
PU-806	Gen Set, TQG, 60 kW, 400 Hz, TRLMTD	6115-01-317-2133	A-25

APPENDIX A
THE PRESENT AND PROPOSED STANDARD FAMILY OF MEPGS
AND ASSOCIATED POWER UNITS AND POWER PLANTS

A.1 SCOPE

A.1.1 Scope. This Appendix identifies the current and proposed members of the DoD Standard Family of MEPGS to include trailer mounted configurations (Power Units and Power Plants). Data contained in this Appendix is for information only and is provided to assist both field operation and materiel developer personnel to select the power generation source that will best meet their needs. Supportable Standard Family power sources that are no longer procurable are not included in this Appendix but do appear in Appendix E. DoD activities are to utilize these power sources to the maximum extent practicable per DoD DIRECTIVE 4120.11.

A.1.2 Appendix Organization. This Appendix is a compilation of characteristics data sheets (see TABLE A-I) arranged by power rating capacity. Within a power rating, a skid mounted power generating source is listed first followed by its trailer mounted variants.

TABLE A-I. Guide to CHARACTERISTICS DATA SHEETS of APPENDIX A

MODEL NO.	ITEM DESCRIPTION	NSN	FIG	PAGE
MEP-501A	2 kW, 28 VDC, DED	6115-01-435-1567	A-1	19
MEP-531A	2 kW, 60 Hz, DED	6115-01-435-1565	A-1	19
MEP-831A	3 kW, 60 Hz, DED TQG	6115-01-285-3012	A-2	21
MEP-832A	3 kW, 400 Hz, DED, TQG	6115-01-287-2431	A-2	21
PP-AN/MJQ-42	Power Plant, TQG, 3 kW, 60 Hz TRLMTD	6115-01-322-8583	A-3	23
PP-AN/MJQ-43	Power Plant, TQG, 3 kW, 60 Hz TRLMTD	6115-01-322-8582	A-4	24
MEP-802A	5 kW, 60 Hz, DED TQG	6115-01-274-7387	A-5	25
MEP-812A	5 kW, 400 Hz, DED TQG	6115-01-274-7391	A-5	25
PU-797A	Generator Set, TQG, 5 kW, 60 Hz, TRLMTD	6115-01-413-3820	A-6	27
PU-797	Generator Set, TQG, 5 kW, 60 Hz, TRLMTD	6115-01-332-0741	A-6	27
PP-AN/MJQ-35A	Power Plant, TQG, 5 kW, 60 Hz TRLMTD	6115-01-414-9697	A-7	28
PP-AN/MJQ-35	Power Plant, TQG, 5 kW, 60 Hz TRLMTD	6115-01-313-4216	A-7	28
PP-AN/MJQ-36	Power Plant, TQG, 5 kW, 60 Hz TRLMTD	6115-01-313-4215	A-8	29
MEP-803A	10 kW, 60 Hz, DED TQG	6115-01-275-5061	A-9	30
MEP-813A	10 kW, 400 Hz, DED TQG	6115-01-274-7392	A-9	30
PU-798A	Generator Set, TQG, 10 kW, 60 Hz, TRLMTD	6115-01-413-3818	A-10	32
PU-798	Generator Set, TQG, 10 kW, 60 Hz, TRLMTD	6115-01-319-9032	A-10	32
PU-799A	Gen Set, TQG, 10 kW, 400 Hz, TRLMTD	6115-01-413-3819	A-11	33
PU-799	Gen Set, TQG, 10 kW, 400 Hz, TRLMTD	6115-01-313-4283	A-11	33
PP-AN/MJQ-37	Power Plant, TQG, 10 kW, 60 Hz TRLMTD	6115-01-299-6035	A-12	34
PP-AN/MJQ-38	Power Plant, TQG, 10 kW, 400 Hz TRLMTD	6115-01-313-4214	A-13	35
MEP-804A	15 kW, 50/60 Hz, DED TQG	6115-01-274-7388	A-14	36
MEP-814A	15 kW, 400 Hz, DED TQG	6115-01-274-7393	A-14	36
PU-800	Generator Set, TQG, 15 kW, 400 Hz, TRLMTD	6115-01-317-2137	A-15	38
PU-801A	Gen Set, TQG, 15 kW, 50/60 Hz, TRLMTD	6115-01-413-3821	A-16	38
PU-801	Gen Set, TQG, 15 kW, 50/60 Hz, TRLMTD	6115-01-319-9033	A-16	39
PU-802	Gen Set, TQG, 15 kW, 50/60 Hz, TRLMTD	6115-01-317-2138	A-17	40
PP-AN/MJQ-39	Power Plant, TQG, 15 kW, 400 Hz TRLMTD	6115-01-299-6034	A-18	41
MEP-805A	30 kW, 50/60 Hz, DED TQG	6115-01-274-7389	A-19	42
MEP-815A	30 kW, 400 Hz, DED TQG	6115-01-274-7394	A-19	42
PU-803	Gen Set, TQG, 30 kW, 50/60 Hz, TRLMTD	6115-01-317-2136	A-20	44
PU-804	Generator Set, TQG, 30 kW, 400 Hz, TRLMTD	6115-01-317-2135	A-21	45
PP-AN/MJQ-40	Power Plant, TQG, 30 kW, 50/60 Hz TRLMTD	6115-01-299-6033	A-22	46
MEP-806A	60 kW, 50/60 Hz, DED TQG	6115-01-274-7390	A-23	47

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APPENDIX A
TABLE A-I. Guide to CHARACTERISTICS DATA SHEETS of APPENDIX A - continued

MODEL NO.	ITEM DESCRIPTION	NSN	FIG	PAGE
MEP-816A	60 kW, 400 Hz, DED TQG	6115-01-274-7395	A-23	47
PU-805	Gen Set, TQG, 60 kW, 50/60 Hz, TRLMTD	6115-01-317-2134	A-24	49
PU-806	Generator Set, TQG, 60 kW, 400 Hz, TRLMTD	6115-01-317-2133	A-25	50
PP-AN/MJQ-41	Power Plant, TQG, 60 kW, 50/60 Hz TRLMTD	6115-01-303-7896	A-26	51
PP-AN/MJQ-1610	Power Plant, TQG, 60 kW, 400 Hz, TRLMTD	6115-01-	A-27	52
PP-AN/MJQ-1612	Power Plant, TQG, 60 kW, 50/60 Hz, TRLMTD	6115-01-349-1536	A-28	53
MEP-808A	100 kW, 50/60 Hz, DED TQG	6115-01-296-1463	A-29	54
MEP-818A	100 kW, 400 Hz, DED TQG	TBD	A-29	54
MEP-809A	200 kW, 50/60 Hz, DED TQG	6115-01-296-1462	A-30	55
TBD	LARGE PRIME POWER SET	TBD	A-31	56

A.2 APPLICABLE DOCUMENTS

This section is not applicable to this appendix.

A.3 DEFINITIONS

A.3.1 use definitions of basic document.

A.4 GENERAL DESCRIPTIONS

A.4.1 Item Descriptions.

A.4.1.1 Military Tactical Generator (MTG). The MTG is a 2 kW diesel engine driven generator set used to meet users requirements of less than 3 kW power. The MTG was introduced into the US military system through the DoD Foreign Comparative Test (FTC) program. It is small, light weight, relatively quiet, and available in 60 Hz, 120V, single phase, and in 28 VDC versions.

A.4.1.2 Tactical Quiet Generator (TQG). The TQGs are reliable, quiet and light weight diesel engine driven generator set in the 3 kW to 60 kW range. The TQGs incorporate commercial components engineered to meet military requirements and are procured in large quantities so they are relatively inexpensive. Larger 100 and 200 kW TQGs are proposed. Also proposed is a Quiet Prime Power Generator (Deployable Power Generation and Distribution System (DPGDS)) to replace the present 500-750 kW Standard Family generator sets.

A.4.1.3 Trailers. Several trailers are used in Power Unit and Power Plant MEPGS systems depending on size, weight and configuration.

a. High Mobility Trailer (HMT). The HMT is a 1-1/4 ton trailer designed to match the cross country mobility of the High Mobility Multipurpose Wheeled Vehicle (HMMWV) while carrying up to a full payload. The HMT was designed to allow mounting of the TQG generators directly to the frame without modification. Some PU/PPs have been fielded with the HMT but no future use of the HMT is planned.

b. M116A3. The M116A3 is a 3/4 ton trailer modified to carry the extra weight of a generator set and its associated hardware. The mobility is sufficient to allow lower speed access to areas accessible to a HMMWV.

c. M103A4. The M103A4 is a 1-1/2 ton trailer modified to carry the extra weight of a generator set and its associated hardware.

d. M200A1. The M200A1 is a 2-1/2 ton trailer modified to carry the extra weight of a generator set and its associated hardware.

APPENDIX A

A.4.2 Delivered condition.

A.4.2.1 Skid sets.

a. Safety Items. Production generator sets may or may not be delivered with fire extinguishers, ground rods or ground rod slide hammer/puller. Units may obtain needed items. See TABLE A-II for details.

b. Batteries. Battery information is included in TABLE A-II. The 2 kW Military Tactical Generator has no battery. It may be started manually or by external 24 VDC electrical power via the NATO slave connector.

c. Auxiliary Fuel Line. A 25 foot auxiliary fuel line is furnished with the 5 kW through 200 kW diesel engine driven generator sets. Fuel lines for the other sets may be ordered (see TABLE A-II) or fabricated on site in accordance with drawing 69-668 (30554).

d. Ether starting aid. Sets greater than 15 kW are equipped with an integral ether starting aid for temperatures below 40 °F. Ether bottles may be obtained as NSN 2910-00-209-4997.

e. Paralleling cables. Sets greater than 15 kW are designed for parallel operation as well as single set operation. Sets are supplied with a paralleling cable for interconnection of the voltage regulators and governor systems of the sets to be paralleled. Additional details on parallel operation are contained in the generator set manuals and FM 20-31, Electrical Power Generation in the Field.

f. Power output terminals. Power output terminals consist of split-lug terminals with captive nuts. The Power Distribution and Illumination System, Electrical (PDISE) interfaces to the power output terminals via a pigtail connection. In addition, A series of standard power output receptacles (MIL-C-22992) are available through the supply system and the US Army Missile Command (MICOM) has a series of missile system receptacles for the 15 kW through 60 kW DED generator sets.

g. NATO slave receptacle. A NATO slave receptacle is provided with all generator sets LISTED in this Appendix. The slave receptacle can be used to start the generator set from an external 24 VDC power source.

h. Convenience receptacle. A convenience receptacle is provided on all 60 Hz generator sets in this Appendix.

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APPENDIX A

A.4.2.2 Trailer mounted sets. The trailer mounted set (Power Units and Power Plants) are normally delivered with ground kit (ground rods, connectors, ground terminal), ground rod driver/puller, 8 pound hammer, and a fire extinguisher per trailer. See TABLE A-II for details.

TABLE A-II. Batteries and auxiliary equipment

MODEL	DESCRIPTION	NSN	APPLICATION
BATTERIES			
2HN	LEAD-ACID	6140-00-057-2553	5 kW TQG
6TL	LEAD-ACID	6140-01-210-1964	15 kW - 200 kW TQG
OPTIMA	STARVED-ELECTROLYTE	6140-01-347-2243	10 kW TQG
GROUNDING ITEMS			
	GROUND ROD KIT (includes rod, connectors, terminal)	5975-00-828-3791	TQG, PU, PP
	GROUND ROD (3 ft sec)	5975-00-878-3791	TQG, PU, PP
	DRIVER/PULLER (slide hammer)	5120-01-013-1676	PU, PP
	HAMMER, 8 POUND	5120-00-251-4489	PU, PP
FUEL HANDLING ITEMS			
	AUXILIARY FUEL LINE	2010-00-016-1235	TQG, PU, PP
	FUEL CONTAINER/DRUM ADAPTER	2910-00-066-1235	PU, PP
	5 GAL FUEL CAN	7240-00-222-3088	PU, PP
	SPOUT	7240-00-177-6154	PU, PP
FIRE EXTINGUISHERS			
A-A-1106	5 LB CO2 FIRE EXTINGUISHER	4210-00-270-4512	ALL

A.5 DETAILED DESCRIPTIONS

A.5.1 Detailed Descriptions. Detailed descriptions are contained in the CHARACTERISTICS DATA SHEETS of FIGURES A-1 through A-31. See TABLE A-I.

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APPENDIX A
CHARACTERISTICS DATA SHEET

2 kW Military Tactical Generator

Scheduled to be fielded in FY 1998 (650 urgent requirements fielded in FY96)

Nomenclature	Gen Set, DED, 2kW, DC	Gen Set, DED, 2kW, 60 Hz
Model Number	MEP-501A	MEP-531A
NSN	6115-01-435-1567	6115-01-435-1565
LIN	Z31872	G36237
SSN	M59300	M59400
Wet Weight	138 lb.	158 lb.
Trailer mounted config	none	none
Reliability (MTBOMF)	490 hr	818 hr

Dimensions (LxWxH): 29.5 x 16 x 21.8 in: Cube: 6 cu. ft.

Engine: Diesel, Yanmar model: L48AE-DEG, 4.2 horsepower @ 3600 RPM, air cooled, 24 VDC start from NATO slave receptacle, recoil pull starter.

Fuels: Diesel DL-1, DL-2 and jet fuel: JP-8, Jet A-1. Fuel consumption: 0.33 gal/hr @ .75 rated load. Fuel capacity: 1.6 gal.

Electrical: Drip proof generator enclosure, fungus & moisture treated, solid state voltage regulator, brush type 2 pole alternator, solderless connectors, AC: Mechtron Power, DC: Balmar.

Maintenance Ratio: 0.033 - organization; 0.008 - direct support.

Protective Devices: Trip circuit breaker for overload/short circuit.

Automatic shutdown for low oil pressure.

Instrumentation: Voltmeter, ammeter, hour meter, frequency meter (AC only).

EMI: Suppressed to MIL-STD-461 limits. EMP: none.

Environmental Capability: -25 °F to 120 °F, rain, humidity, altitude, sand/dust, rail transport, -65 °F cold storage, salt spray, fungus.

Voltage connection	120 V, 1 phase, 2 wire	28 VDC, 2 wire
Voltage adj. range	114 to 126 V	26.6 - 32.0 V
Frequency adj. range	±5.5%	N/A

Electric Power Rating: 2 kW, 1.0 pf @ 4000 ft/120 °F. derate 3.5%/1000 ft (4000 - 8000 ft). Max power: 110% Rated.

Electric Power Quality	AC voltage	frequency	DC voltage
Regulation	4%	5.6%	4%
Voltage modulation	2%		
Short term steady st stability (30 sec)	2% bandwidth	3% bandwidth	2% bandwidth
Long term steady state stability (4 hr)	4% bandwidth	3% bandwidth	2% bandwidth
Application of rated load (transient) recovery	30% dip 3 sec	8% undershoot 4 sec	30% dip 1 sec
Rejection of rated load (transient) recovery	30% rise 3 sec	10% overshoot 5 sec	40% rise 0.5 sec
motor load	not rated		
Max waveform deviation factor	16%		
Individual waveform harmonic	15%		
DC ripple			7%

Noise: 79 dBA @ 7 meters (23 ft).

Human Factors: 4 soldier portable; operable in chemical/arctic clothing.

Optional Equipment: None

Technical Manuals: TM9-6115-673-13&P (DRAFT)

FIGURE A-1 2 kW Military Tactical Generators

APPENDIX A
CHARACTERISTICS DATA SHEET
2 kW Military Tactical Generator



MEP-501A, 28 VDC (MEP-531A, 120 V, 60 Hz, has three meters and convenience receptacle)

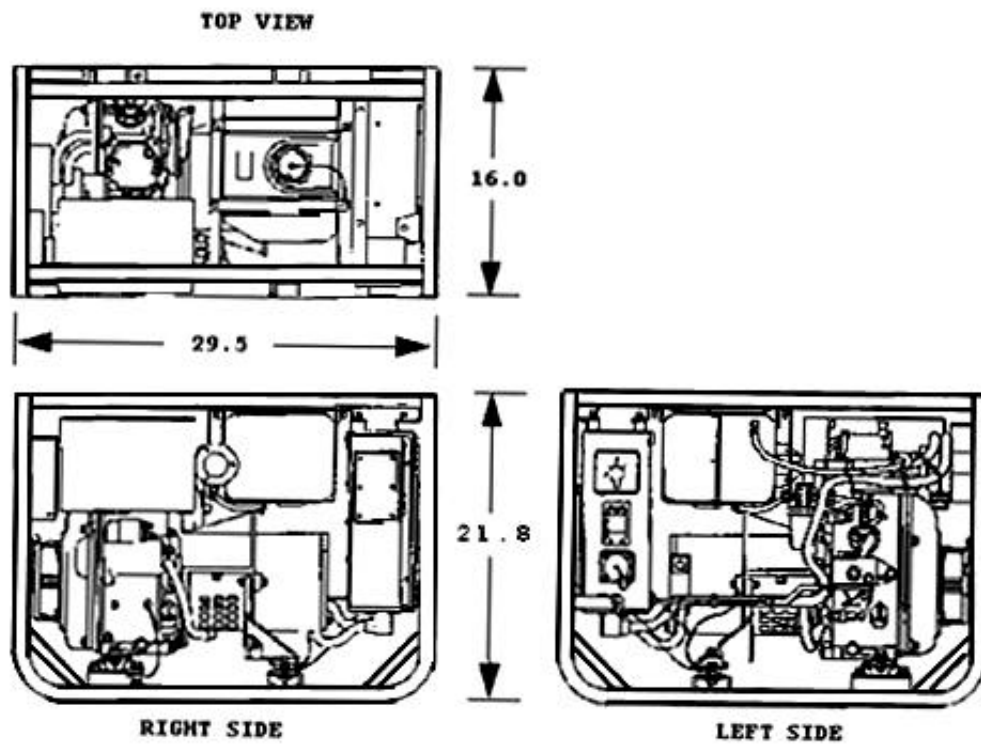


FIGURE A-1 2 kW Military Tactical Generators - Continued

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APPENDIX A
CHARACTERISTICS DATA SHEET
3 kW TACTICAL QUIET GENERATOR SETS
(IN DEVELOPMENT)
Scheduled to be fielded in FY 2000

Nomenclature	Gen Set, DED, 3kW, 60 Hz	Gen Set, DED, 3kW, 400 Hz
Model Number	MEP-831A	MEP-832A
NSN	6115-01-285-3012	6115-01-287-2431
LIN	G18358	G74847
SSN	M58100	M53600
Wet Weight	325 lb. (PD)	325 lb. (PD)
Trailer mounted configurations	PP-AN/MJQ-42, FIG: A-3 PP-AN/MJQ-43, FIG: A-4	none
Substitute MEPGS	MEP-701A, FIG: E-4 PP-AN/MJQ-32, FIG: E-5 PP-AN/MJQ-33, FIG: E-6	MEP-812A (FIG A-5) or MEP-021C (FIG E-3)

Dimensions(LxWxH): TBD; Cube: TBD cu. ft.

Engine: TBD:.

Fuels: Diesel DL-1, DL-2 and jet fuel JP-8, Jet A-1. Consumption: TBD gallons/hour at rated load. Fuel capacity: TBD gallons

Electrical: Drip proof generator enclosure, fungus & moisture treated, solid state voltage regulator, brushless type, 2 pole alternator , solderless connectors, 60: TBD, 400: TBD.

RAM: 350 Hr. MTBOMF (specified)

Protective Devices: TBD

Instrumentation: TBD

EMI: Suppressed to MIL-STD-461 limits. EMP: HAEMP IAW MIL-STD-2169.

Electric Power Quality: MIL-STD-1332

<u>Voltage</u>	60 Hz, 1 phase, 120 V, 2 wire, 240 V	400 Hz, same connections,
<u>Connection</u>	2 wire, 120/240 V 3 wire & conv recp	no convenience recp

Electric Power Rating: 3 kW, 0.8 pf @ 4000 ft/120 °F. 110% max power.

Environmental Capability: -25 °F to 120 °F, rain, humidity, altitude, sand/dust, transportation, -45 °F cold storage, salt spray, fungus.

Noise: 75 dBA @ 7 meters (23 ft) (specified).

Human Factors: MIL-STD-1474.

Optional Equipment: None

Technical Manuals: TBD

FIGURE A-2 3 kW Tactical Quiet Generators

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APPENDIX A
CHARACTERISTICS DATA SHEET
3 kW TACTICAL QUIET GENERATOR SETS
(IN DEVELOPMENT)
Scheduled to be fielded in FY 2000

PHOTOGRAPHS
AND
DRAWINGS

NOT AVAILABLE

FIGURE A-2 3 kW Tactical Quiet Generators

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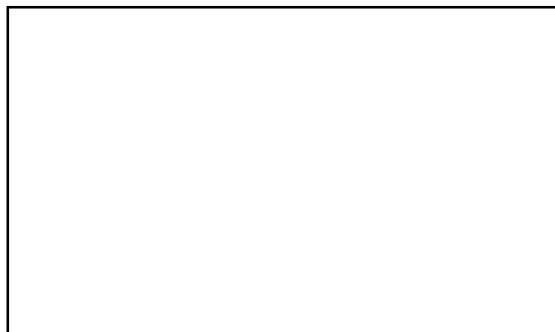
APPENDIX A
CHARACTERISTICS DATA SHEET

PP-AN/MJQ-42, TQ POWER PLANT, DED 3kW, 60 Hz, TRLMTD
Scheduled to be fielded in FY 2000, substitute PP-AN/MJQ-32

NSN	6115-01-322-8583	Dimensions (in.)	TBD
LIN	Z13645	Op. Weight	TBD
SSN	M50600	Ship weight	TBD
ASSMB	TBD	Ship Cube	TBD
SPEC	MIL-P-53132/2	Camouflage	TBD

COMPONENT	QTY	IDENTIFIER
Modified 3/4 ton trailer, M116A3	1	97403-13229E5757
TQ Generator set, DED, 3 kW, 60 Hz, MEP-831A	2	6115-01-285-3012
Fuel can, 5 gallon	2	7240-00-222-3088
Accessory box	1	TBD
Fire extinguisher, 5 lb., A-A-1106	1	4210-00-270-4512
Switch box	1	TBD
Stowage rack assembly	1	TBD

PHOTO - TBD



DRWNG - TBD

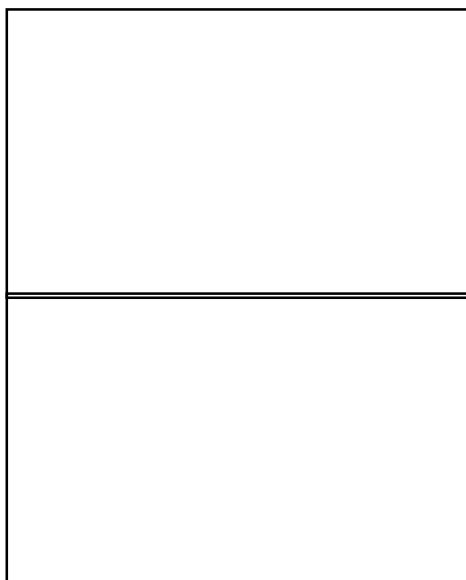


FIGURE A-3 PP-AN/MJQ-42

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APPENDIX A
CHARACTERISTICS DATA SHEET

PP-AN/MJQ-43, TQ POWER PLANT, DED 3kW, 60 Hz, TRLMTD
Scheduled to be fielded in FY 2000, substitute PP-AN/MJQ-33

NSN	6115-01-322-8582	Dimensions (in.)	132.0 x 86.0 x TBD
LIN	Z13713	Op. Weight	TBD
SSN	M54800	Ship weight	TBD
ASSMB	TBD	Ship Cube	TBD
SPEC	MIL-P-53132/1	Camouflage	TBD

COMPONENT	QTY	IDENTIFIER
Modified 3/4 ton trailer, M116A3	1	97403-13229E5757
TQ Generator set, DED, 3 kW, 60. Hz, MEP-831A	2	6115-01-285-3012
Fuel can, 5 gallon	2	7240-00-222-3088
Accessory box	1	TBD
Fire extinguisher, 5 lb., A-A-1106	1	4210-00-270-4512
Switch box	1	TBD

PHOTO - TBD

DRWNG - TBD

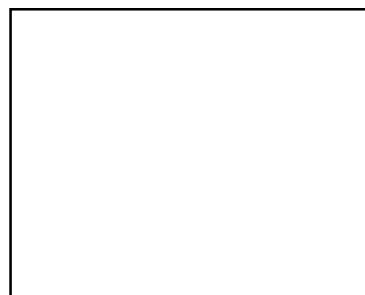


FIGURE A-4 PP-AN/MJQ-43

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APPENDIX A
CHARACTERISTICS DATA SHEET
5 kW Tactical Quiet Generator

Nomenclature	Gen Set, 5 kW, DED, 60 Hz	Gen Set, 5kW, DED, 400 Hz
Model Number	MEP-802A	MEP-812A
NSN	6115-01-274-7387	6115-01-274-7391
LIN	G11966	G12102
SSN	M535	M518
Specification	MIL-DTL-53133/1	MIL-DTL-53133/2
Wet Weight	888 lb.	911 lb.
Fuel consumption	.57 gal/hour	.56 gal/hour
Trailer mounted configurations	PU-797; PU-797A: FIG A-6 AN/MJQ-35; AN/MJQ-35A: FIG A-7 AN/MJQ-36: FIG A-8	none

Dimension: LxWxH (in.): 50.4 x 31.8 x 36.2; Cube: 34 cu. ft.

Engine: Diesel, Onan DN2M, 2 cyl, 11.0 hp @ 1800 RPM, 24 VDC starter, liquid cooled.

Fuels: Diesel DL-1, DL-2 and jet fuel JP-8, Jet A-1. Fuel capacity: 5 gallons

Electrical: Drip proof generator enclosure, fungus & moisture treated, solid state voltage regulator, brushless rotary exciter, solderless connectors, 60 Hz: Onan, 4 pole; 400 Hz: Onan, 24 pole. Convenience receptacle on 60 Hz set.

Voltage connection	1 phase 120 V, 2 wire	1 phase 120/240 V, 3 wire	3 phase 120/208 V, 4 wire
volt adj range	114 - 126 V	228 - 252 V	205 - 220 V
freq adj range	±3%	±3%	±3%

Electric Power Rating: 5 kW, 0.8 power factor @ 4000 ft/120 °F. Derate 3.5% per 1000 ft (4000 to 8000 ft). Max power: 110% rated.

Electric Power Quality	Voltage	Frequency
Regulation (max)	3%	3%
Modulation (max)	2.5%	
Short term steady state stability (30 sec)	2% bandwidth	2% bandwidth
Long term steady state stability (4 hr)	3% bandwidth	3% bandwidth
Application/rejection of rated load recovery:	20% dip, 20% rise 3 sec	3% under/4% over 3 sec
motor load (low power factor), recovery	35% dip, 5 sec to 95% initial voltage	
Max waveform deviation factor	6% (1 ph); 5% (3 ph)	
Individual waveform harmonic	3% (1 ph); 2% (3 ph)	

Reliability: 442 hour MTBOMF. Maintenance ratio: less than 0.05

Protective Devices: Automatic shut down with emergency bypass for low fuel, low oil pressure, coolant over temperature, and overload.

Instrumentation: On/off switch, Hour/volt/frequency meter, oil pressure.

EMI: Suppressed to MIL-STD-461 limits. EMP: HAEMP per MIL-STD-2169.

Technical Manual		
manual type	Army	Air Force
Operators Manual	TM 9-6115-641-10	TO 35C2-3-456-11
Unit, Direct Support	TM 9-6115-641-24	
Repair Parts and Special Tools List	TM 9-6115-641-24P	
Lubrication Order	LO 9-6115-641-12	
Warranty Technical Order	TB 9-6115-641-24	

Environmental Capability: -25 °F to 120 °F, rain, humidity, altitude, sand/dust, transportation, -60 °F cold storage, salt spray, fungus.

Noise: 70 dBA @ 7 meters (23 ft).

Human Factors: In accordance with MIL-STD-1472 and MIL-STD-1474.

Optional Equipment: None

FIGURE A-5 5 kW Tactical Quiet Generator Sets

APPENDIX A
CHARACTERISTICS DATA SHEET
5 kW Tactical Quiet Generator



MEP-802A or MEP-812A

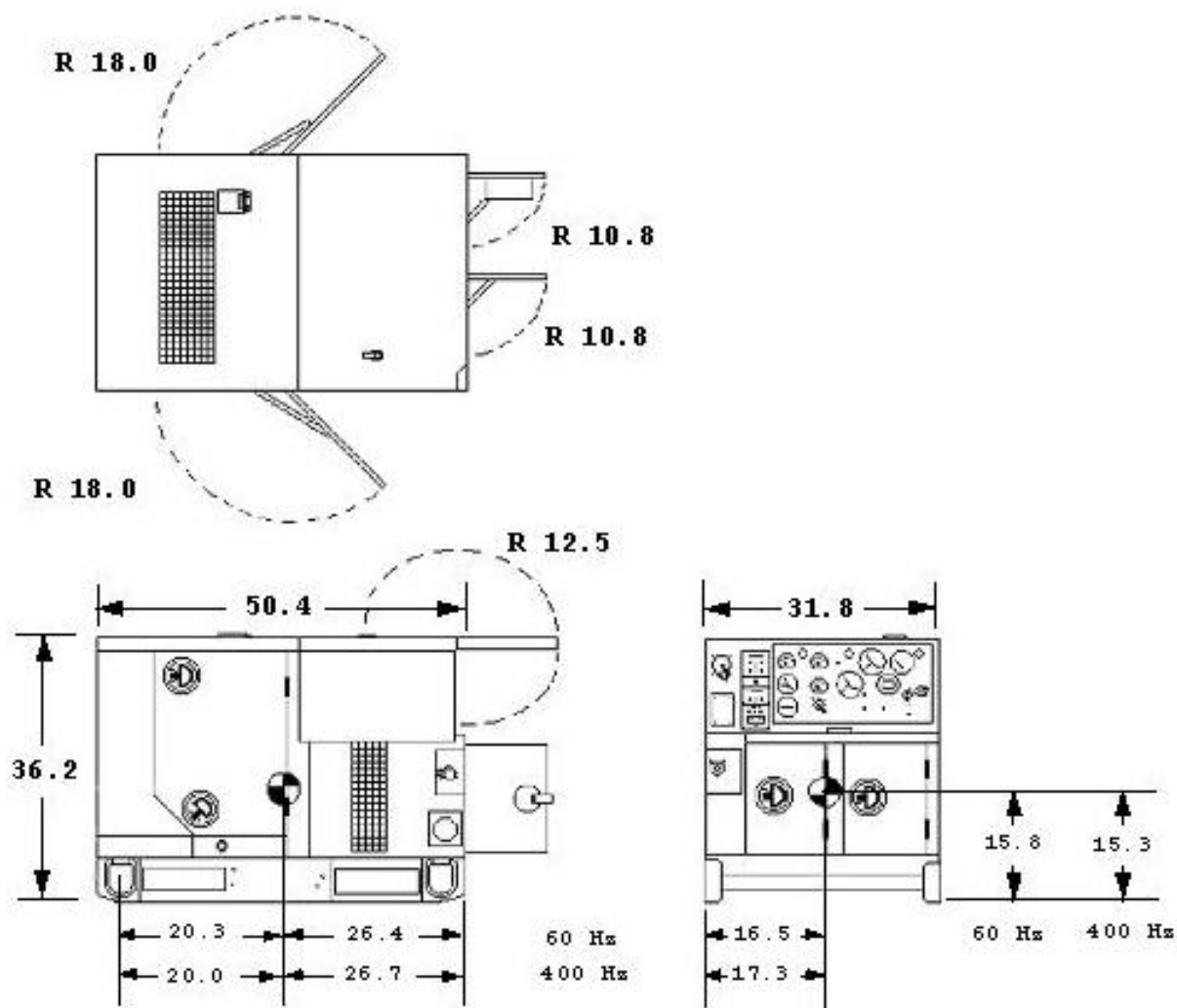


FIGURE A-5 5 kW Tactical Quiet Generator Sets - continued

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APPENDIX A
CHARACTERISTICS DATA SHEET

PU-797*, TQ POWER UNIT, DED, 5kW, 60 Hz, TRLMTD

NSN	6115-01-332-0741	Dimensions (in.)	147.0 x 83.5 x 69.3
LIN	G42238	Op. Weight	2320 lb.
SSN	R62700	Ship weight	2360 lb
ASSMB	TA-13229E5705	Ship Cube	410 cu ft
SPEC	MIL-P-53132/5	Camouflage	97403-13228E1608

COMPONENT	QTY	FIND	IDENTIFIER
3/4 Ton modified Trailer, M116A3	1	1	97403-13229E5757
Generator set, TQ DED, 5 kW, 60 Hz, MEP-802A	1	2	6115-01-274-7387
Accessory box	1	3	97403-13229E7946
Fire extinguisher, 5 lb., A-A-1106	1	4	4210-00-270-4512

* Some PU797As, NSN: 6115-01-413-3820, which use a High Mobility Trailer in lieu of the M116A3, were fielded but are no longer manufactured.

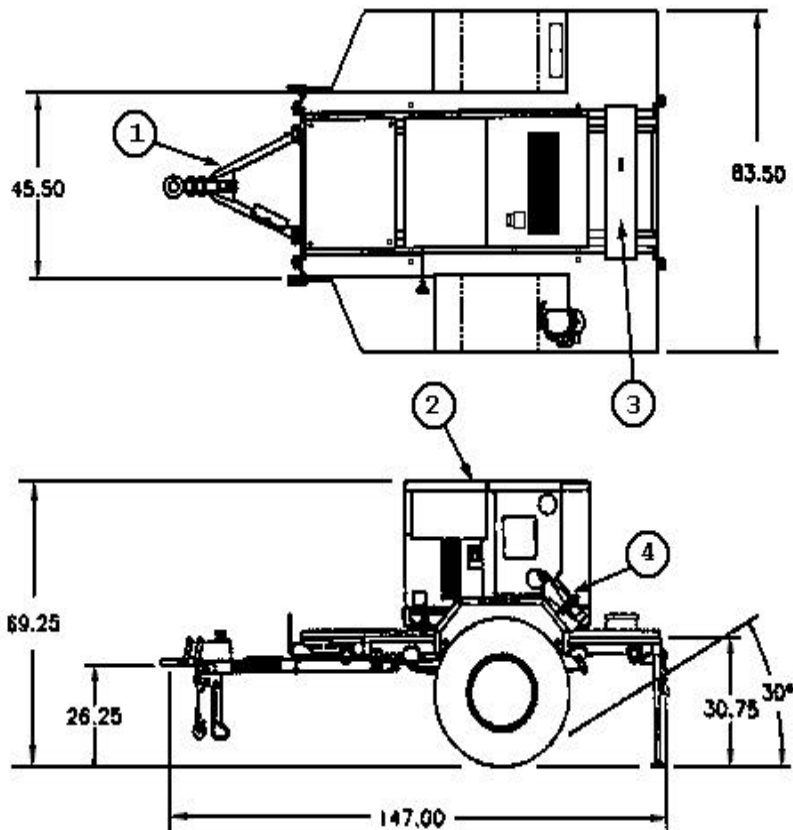


FIGURE A-6 PU-797

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APPENDIX A
CHARACTERISTICS DATA SHEET

PP-AN/MJQ-35*, TQ POWER PLANT, DED, 5kW, 60 Hz, TRLMTD

NSN	6115-01-313-4216	Dimensions (in.)	154.0 x 83.5 x 69.3
LIN	P28083	Op. Weight	3087 lb.
SSN	M54100	Ship weight	3285 lb
ASSMB	TA-13229E5705	Ship Cube	420 cu ft
SPEC	MIL-P-53132/3	Camouflage	97403-13228E1609

COMPONENT	QTY	FIND	IDENTIFIER
3/4 Ton modified Trailer, M116A3	1	1	97403-13229E5757
Generator set, DED, 5 kW, 60 Hz, MEP-802A	2	2	6115-01-274-7387
Accessory box	1	3	97403-13229E7946
Fire extinguisher, 5 lb., A-A-1106	1	4	4210-00-270-4512
Switch box,	1	5	97403-13229E6535

* A few MJQ-35As, NSN: 6115-01-414-9697, which use a High Mobility Trailer in lieu of the M116A3, were fielded but are no longer manufactured.

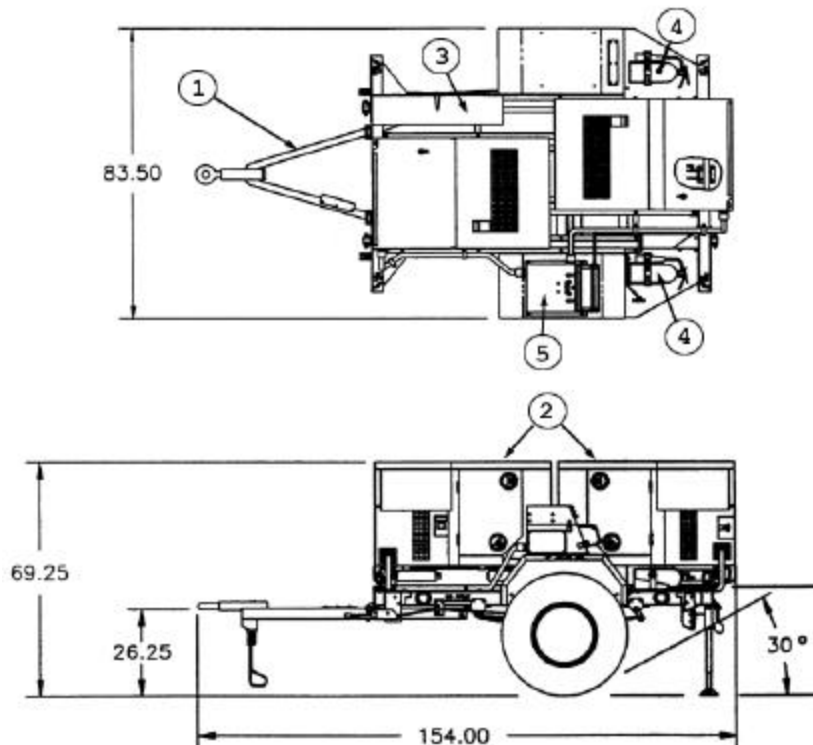
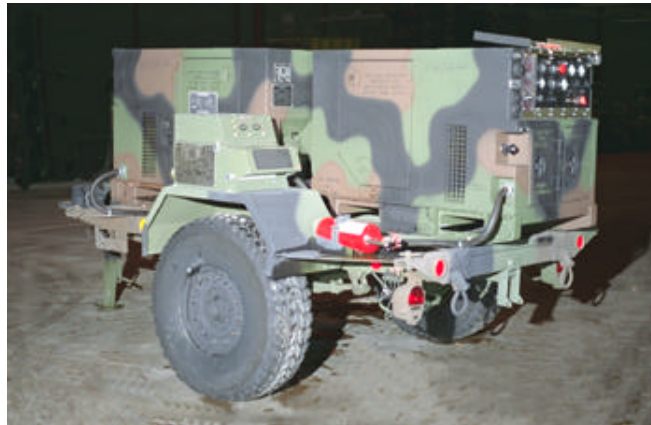


FIGURE A-7 PP-AN/MJQ-35

DRAFT
MIL-HDBK-633F

APPENDIX A
CHARACTERISTICS DATA SHEET

PP-AN/MJQ-36, TQ POWER PLANT, DED, 5kW, 60 Hz, TRLMTD

NSN	6115-01-313-4215	Dimensions (in.)	154.0 x 83.5 x 69.3
LIN	P28151	Op. Weight	3785 lb.
SSN	M66200	Ship weight	3985 lb
ASSMB	TA-13229E5660	Ship Cube	600 cu ft
SPEC	MIL-P-53132/4	Camouflage	97403-13228E1610

COMPONENT	QTY	FIND	IDENTIFIER
1-1/2 Ton modified trailer, M103A4	1	1	97403-13229E5825
Generator set, TQ DED, 5 kW, 60 Hz, MEP-802A	2	2	6115-01-274-7387
Accessory box	1	3	97403-13229E7946
Fire extinguisher, 5 lb., A-A-1106	2	4	4210-00-270-4512
Switch box	1	5	97403-13229E6535

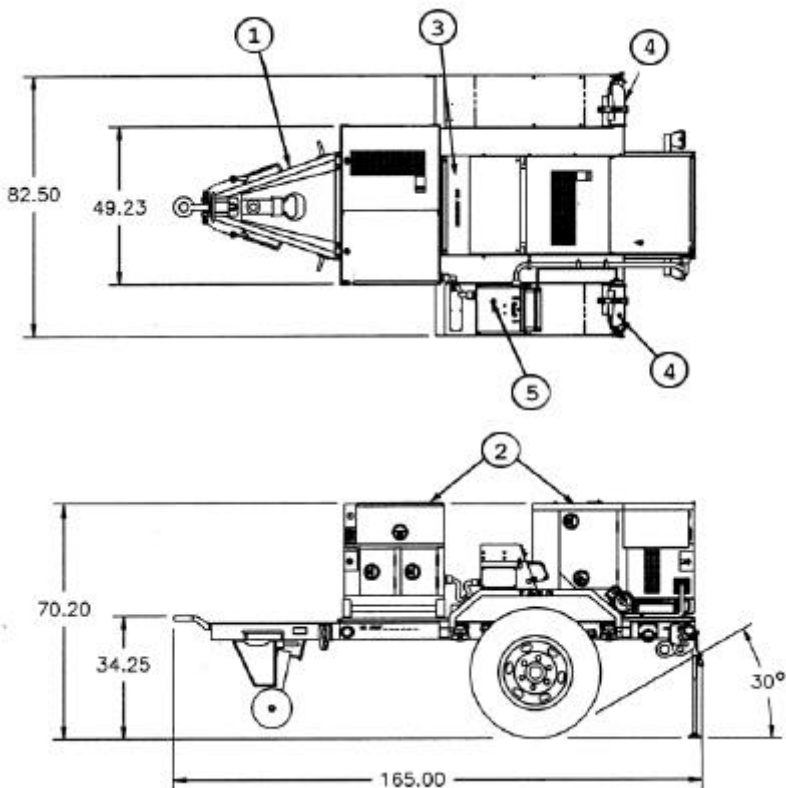


FIGURE A-8 PP-AN/MJQ-36

DRAFT
MIL-HDBK-633F

APPENDIX A
CHARACTERISTICS DATA SHEET
10 kW TACTICAL QUIET GENERATOR

Nomenclature	Gen Set, 10kW, DED, 60 Hz	Gen Set, 10kW, DED, 400 Hz
Model Number	MEP-803A	MEP-813A
NSN	6115-01-275-5061	6115-01-274-7392
LIN	G74711	G74779
SSN	M52900	M56500
Specification	MIL-DTL-53133/3	MIL-DTL-53133/4
Wet Weight	1182 lb.	1220 lb.
Fuel consumption	.97 gal/hour	1.00 gal/hour
Reliability	600 hr MTBOMF	462 hr MTBOMF
Trailer mounted configurations	PU-798, PU-798A: FIG A-10 PP-AN/MJQ-37: FIG A-12	PU-799, PU-799A: FIG A-11 PP-AN/MJQ-38: FIG A-13

Dimension: LxWxH (in.): 61.7 x 31.8. x 36.2 Cube: 41 cu. ft.

Engine: Diesel, Onan model: DN4M-1, 4 cyl, 22 horsepower @ 1800 RPM, Liquid cooled, 24 VDC starter.

Fuels: Diesel DL-1, DL-2 and jet fuel JP-8, Jet A-1. Fuel capacity: 9 gal.

Electrical: Drip proof generator enclosure, fungus & moisture treated, solid state voltage regulator, solderless connectors, Onan synchronous rotating field generator: 60: 4 pole alternator, 400: 24 pole.

Voltage connection	1 phase 120 V, 2 wire	1 phase 120/240 V, 3 wire	3 phase 120/208 V, 4 wire
voltage adj range	114 - 126 V	228 - 252 V	205 - 220 V
freq adj range	±3%	±3%	±3%

Electric Power Rating: 10 kW, 0.8 power factor @ 4000 ft/120 °F. Derate: 3.5%/1000 ft (4000 - 8000 ft). Max Power: 110% rated.

Electric Power Quality	Voltage	Frequency
Regulation (max)	3%	3%
Modulation (max)	2.5%	
Short term steady st stability (30 sec)	2% bandwidth	2% bandwidth
Long term steady state stability (4 hr)	3% bandwidth	3% bandwidth
Application, rejection of rated load (transient); recovery:	20% dip, 20% rise 3 sec	3% under, 4% over 3 sec
motor load (low power factor) recovery	35% dip 5 sec to 95% initial V	
Max waveform deviation factor	6% (1 ph); 5% (3 ph)	
Individual waveform harmonic	3% (1 ph); 2% (3 ph)	

Protective Devices: Automatic shut down with emergency bypass for low oil pressure, coolant high temperature, and overvoltage.

Instrumentation: On/off switch, Hour/volt/frequency meter, oil pressure.

EMI: Suppressed to MIL-STD-461 limits. EMP: HAEMP IAW MIL-STD-2169.

Environmental Capability: -25 °F to 120 °F, rain, humidity, altitude, sand/dust, transportation, -60 °F cold storage, salt spray, fungus.

Technical Manuals			
manual type	Army - TM	Air Force - TO	USMC - TM
Operators manual	9-6115-642-10	35C2-3-455-11	
Unit, DS, GS manual	9-6115-642-24	35C2-3-455-12	09247A/09248A-24/2
RPSTL	9-6115-642-24P		
Lubrication Order	LO 9-6115-642-12		
Warranty TO	TB 9-6115-642-24		

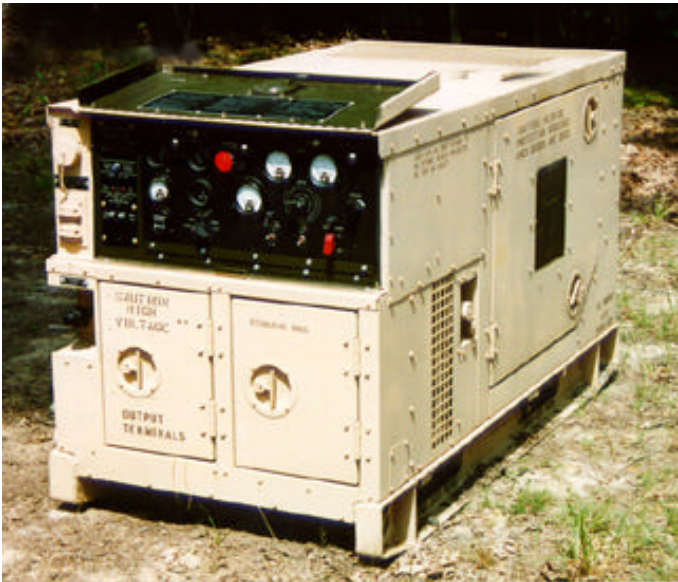
Noise: 70 dBA @ 7 meters (23 ft).

Human Factors: MIL-STD-1472 and MIL-STD-1474.

Optional Equipment: None

FIGURE A-9 10 kW Tactical Quiet Generator sets

APPENDIX A
CHARACTERISTICS DATA SHEET
10 kW TACTICAL QUIET GENERATOR



MEP-803A or MEP-813A

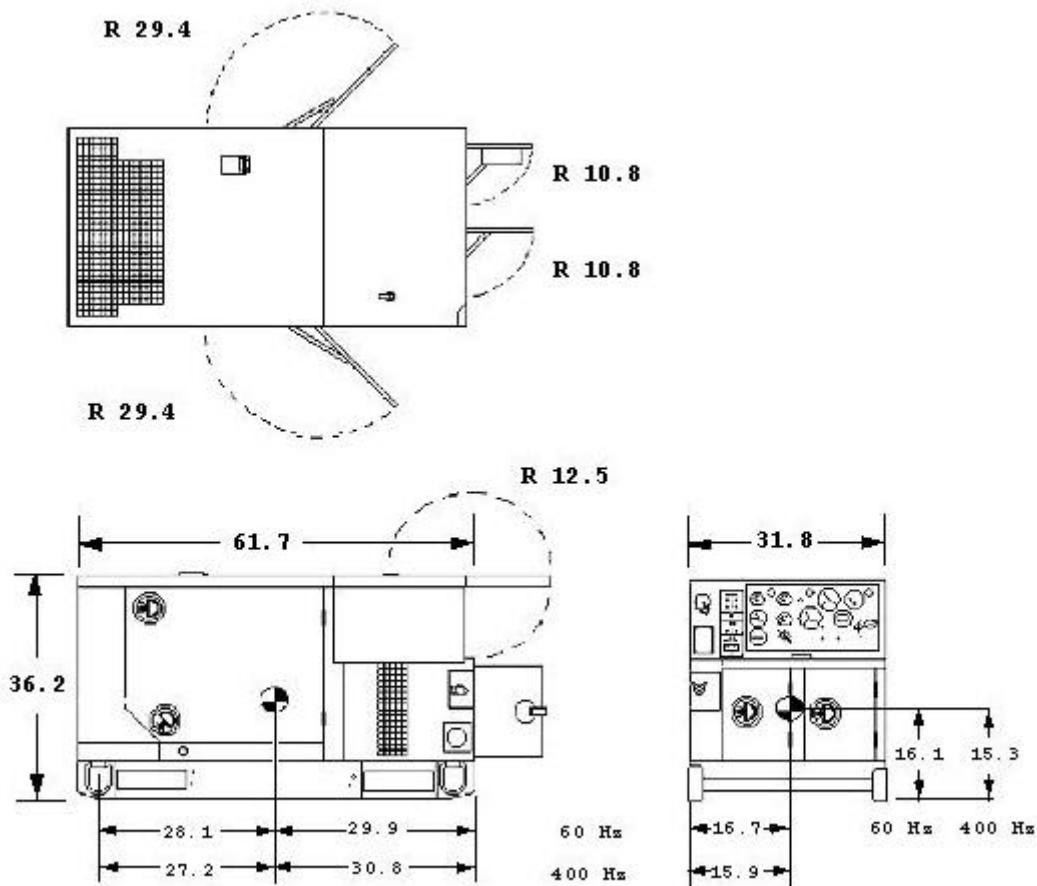


FIGURE A-9 10 kW Tactical Quiet Generator sets - continued

DRAFT
MIL-HDBK-633F

APPENDIX A
CHARACTERISTICS DATA SHEET

PU-798*, TQ POWER UNIT, DED, 10kW, 60 Hz, TRLMTD

NSN	6115-01-319-9032	Dimensions (in.)	147.0 x 83.5 x 69.3
LIN	G42170	Op. Weight	2457 lb.
SSN	R59100	Ship weight	2660 lb
ASSMB	TA-13229E5715	Ship Cube	410 cu ft
SPEC	MIL-P-53132/8	Camouflage	97403-13228E1611

COMPONENT	QTY	FIND	IDENTIFIER
3/4 Ton modified Trailer*, M116A3	1	1	97403-13229E5757
Generator set, TQ DED, 10 kW, 60 Hz, MEP-803A	1	2	6115-01-275-5061
Accessory box	1	3	97403-13229E7946
Fire extinguisher, 5 lb., A-A-1106	1	4	4210-00-270-4512

* A few PU-798As, NSN: 6115-01-413-3818, which use a High Mobility Trailer in lieu of the M116A3, were fielded but are no longer manufactured.



Photo of PU-798A (PU-798 looks identical to PU-799)
Drawing of PU-798

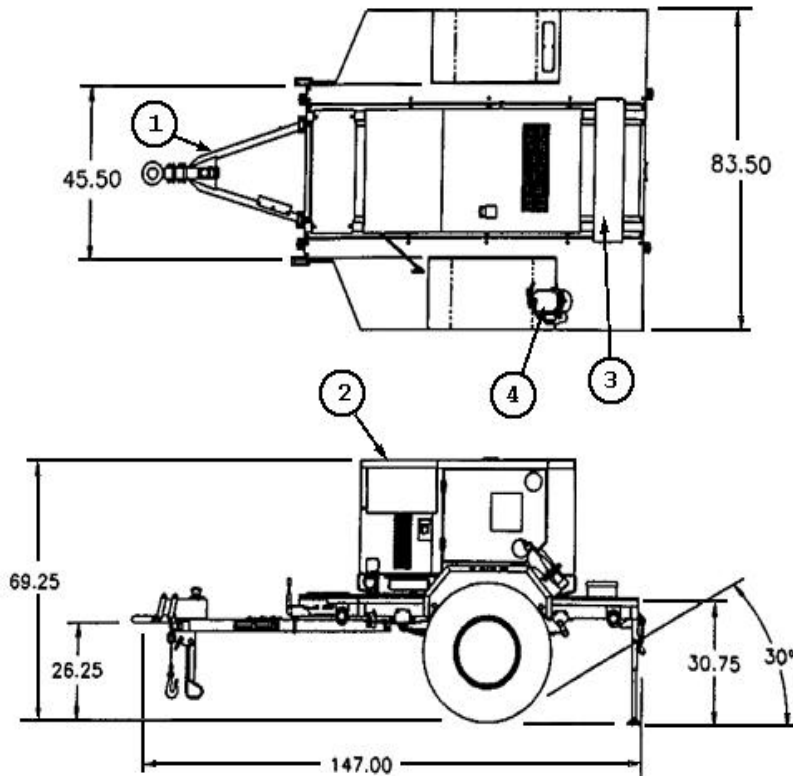


FIGURE A-10 PU-798

DRAFT
MIL-HDBK-633F

APPENDIX A
CHARACTERISTICS DATA SHEET

PU-799*, TQ POWER UNIT, DED, 10kW, 400 Hz, TRLMTD

NSN	6115-01-313-4283	Dimensions (in.)	147.0 x 83.5 x 69.3
LIN	G53403	Op. Weight	2469 lb.
SSN	R57000	Ship weight	2670 lb
ASSMB	TA-13229E5725	Ship Cube	410 cu ft
SPEC	MIL-P-53132/9	Camouflage	97403-13228E1611

COMPONENT	QTY	FIND	IDENTIFIER
3/4 Ton modified Trailer*, M116A3	1	1	97403-13229E5757
TQ Generator set, DED, 10 kW, 400 Hz, MEP-813A	1	2	6115-01-274-7392
Accessory box	1	3	97403-13229E7946
Fire extinguisher, 5 lb., A-A-1106	1	4	4210-00-270-4512

* Some PU-799As, NSN: 6115-01-413-3819, which use a High Mobility Trailer in lieu of the M116A3, were fielded but are no longer manufactured.

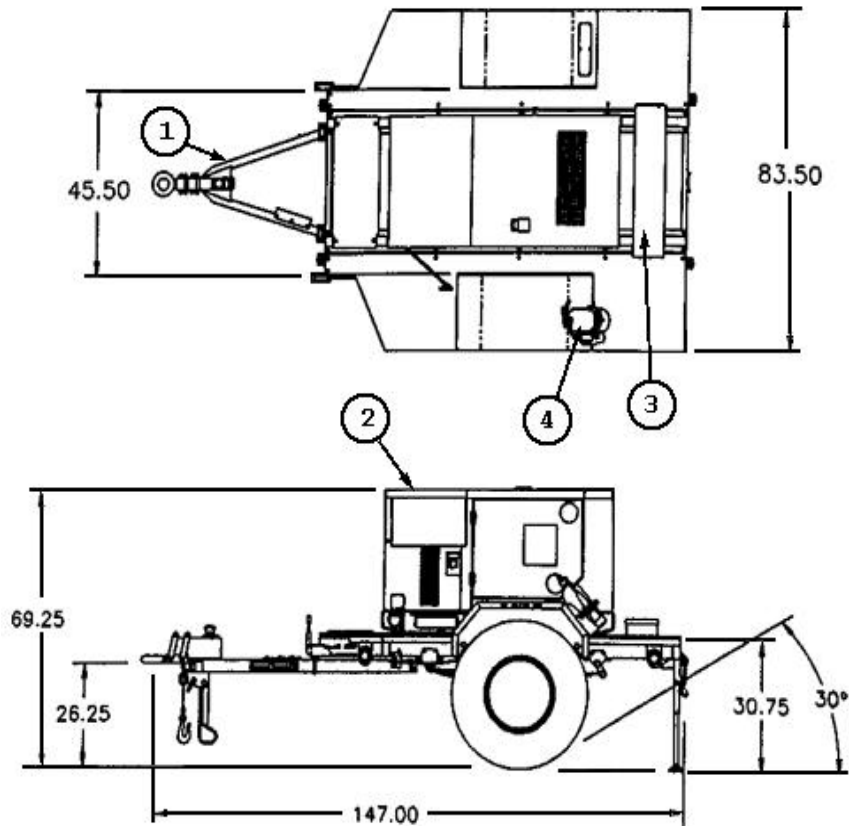


FIGURE A-11 PU-799

DRAFT
MIL-HDBK-633F

APPENDIX A
CHARACTERISTICS DATA SHEET

PP-AN/MJQ-37, TQ POWER PLANT, DED, 10kW, 60 Hz, TRLMTD

NSN	6115-01-299-6035	Dimensions (in.)	165.0 x 82.5 x 70.2
LIN	P42262	Op. Weight	4334 lb.
SSN	R59000	Ship weight	4540 lb
ASSMB	TA-13229E5670	Ship Cube	600 cu ft
SPEC	MIL-P-53132/6	Camouflage	97403-13228E1612

COMPONENT	QTY	FIND	IDENTIFIER
1-1/2 Ton modified trailer, M103A4	1	1	97403-13229E5825
Generator set, TQ DED, 10 kW, 60 Hz, MEP-803A	2	2	6115-01-275-5061
Accessory box	1	3	97403-13229E7946
Fire extinguisher, 5 lb., A-A-1106	2	4	4210-00-270-4512
Switch box	1	5	97403-13229E6535

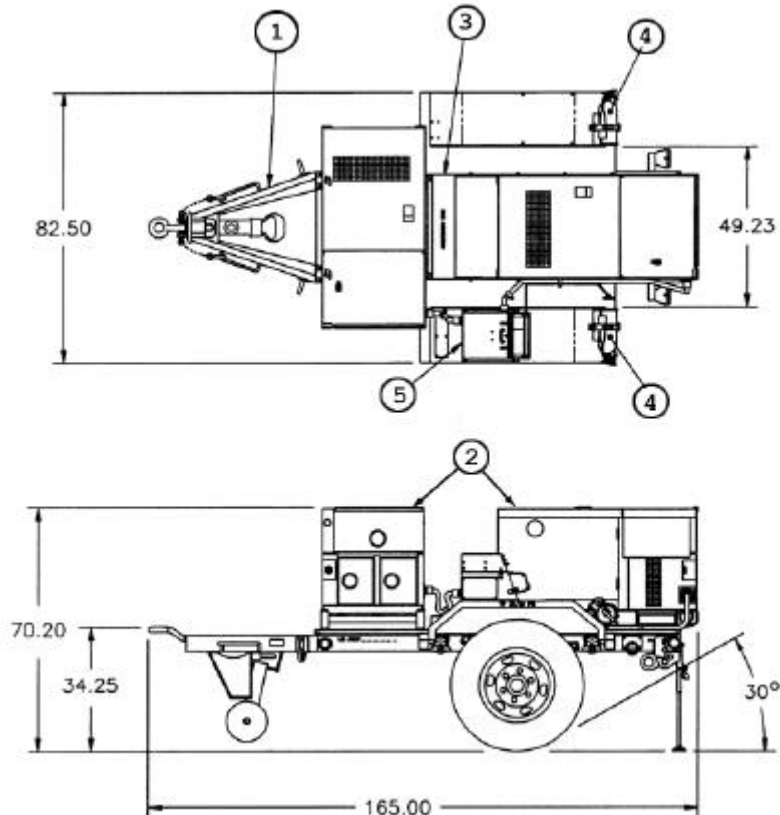


FIGURE A-12 PP-AN/MJQ-37

DRAFT
MIL-HDBK-633F

APPENDIX A
CHARACTERISTICS DATA SHEET

PP-AN/MJQ-38, TQ POWER PLANT, DED, 10kW, 400 Hz, TRLMTD

NSN	6115-01-313-4214	Dimensions (in.)	165.0 x 82.5 x 70.2
LIN	P42330	Op. Weight	4350 lb.
SSN	M52300	Ship weight	4550 lb
ASSMB	TA-13229E5680	Ship Cube	600 cu ft
SPEC	MIL-P-53132/7	Camouflage	97403-13228E1612

COMPONENT	QTY	FIND	IDENTIFIER
1-1/2 Ton modified trailer, M103A4	1	1	97403-13229E5825
Generator set, TQ DED, 10 kW, 400 Hz, MEP-813A	2	2	6115-01-274-7392
Accessory box	1	3	97403-13229E7946
Fire extinguisher, 5 lb., A-A-1106	1	4	4210-00-270-4512
Switch box	1	5	97403-13229E6535

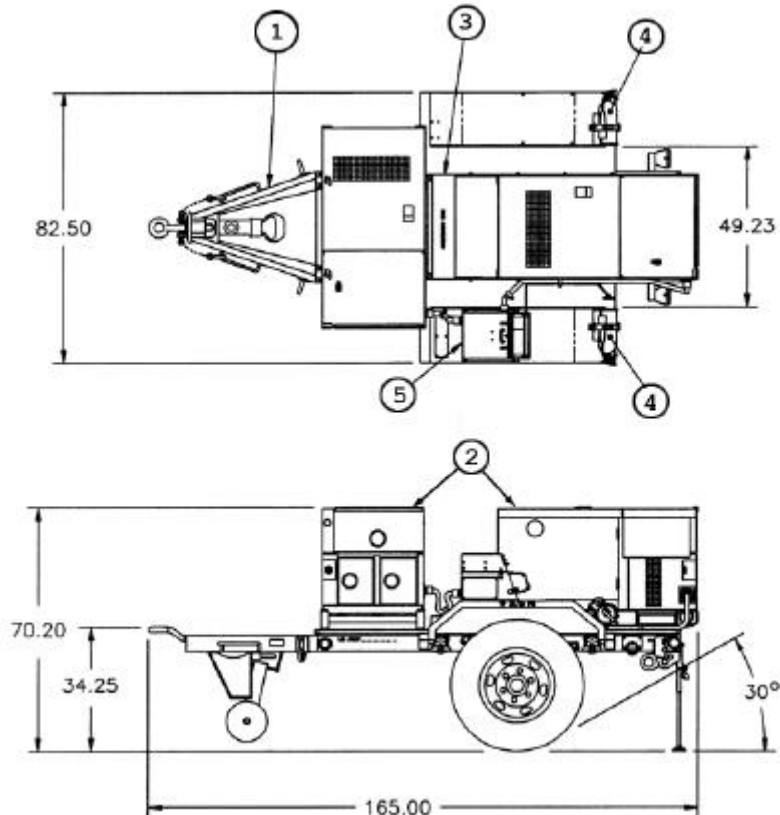


FIGURE A-13 PP-AN/MJQ-38

DRAFT
MIL-HDBK-633F

APPENDIX A
CHARACTERISTICS DATA SHEET
15 kW TACTICAL QUIET GENERATOR

Nomenclature	GEN SET, 15kW, DED, 50/60 Hz	GEN SET, 15kW, DED, 400 Hz
Model Number	MEP-804A	MEP-814A
NSN	6115-01-274-7388	6115-01-274-7393
LIN	G12170	G12238
SSN	M549	M52600
Specification	MIL-DTL-53133/5	MIL-DTL-53133/6
Wet Weight	2124 lb.	2238 lb.
Fuel consumption	1.5 gal/hour	1.75 gal/hour
Reliability	538 hr MTBOMF	337 hr MTBOMF
Trailer mounted configurations	PU-801, PU-801A: FIG A-16 PU-802: FIG A-17	PU-800 FIG A-15 PP-AN/MJQ-39, FIG A-18

Dimensions: LxWxH (in.): 69.3 x 35.3 x 54.1; Cube: 77u. ft.

Engine: Isuzu - Model: C240 4 cyl Diesel, 31 horsepower @ 1800 RPM, 24 VDC starter, liquid cooled.

Fuels: Diesel DL-1, DL-2 and jet fuels JP-8, Jet A-1. Fuel capacity: 14 gal.

Electrical: Drip proof generator enclosure, fungus & moisture treated, solid state voltage regulator, solderless connectors, brushless Marathon/Lima generator.

Voltage connection: Adjustment	50 Hz	60 Hz	400 Hz
120/208 V, 3 phase, 4 wire	190-213 V	197-240 V	197-229 V
240/416 V, 3 phase, 4 wire	380-426 V	395-480 V	395-458 V
Frequency adjustment	48-52 Hz	58-62 Hz	390-420 Hz

Electric Power Rating: 15 kW, 0.8 power factor @ 4000 ft/120 °F. Derate: 3.5%/1000 ft (4000 - 8000 ft). Max Power: 110% of rated power.

Electric Power Quality	Voltage	Frequency	
Regulation (max)	1%	0.25%	
Modulation (max)	2%		
Short term steady st stability (30 sec)	1% bandwidth	0.5% bandwidth	
Long term steady state stability (4 hr)	2% bandwidth	1% bandwidth	
Application, rejection of rated load (transient); recovery:	15% dip, 15% rise 0.5 sec	50/60: 4% u/o, 2 sec	400: 1.5% u/o, 1 sec
motor load (low power factor) recovery	30% dip; 0.7 sec to 95% initial V		
Max waveform deviation factor	5%		
Individual waveform harmonic	2%		

Protective Devices: Automatic shut down with emergency bypass for low oil pressure, coolant high temperature, overspeed, and overvoltage.

Instrumentation: On/off switch, Hour, volt, frequency, oil pressure, coolant temperature.

EMI: Suppressed to MIL-STD-461 limits. EMP: HAEMP IAW MIL-STD-2169.

Environmental Capability: -25 °F to 120 °F, rain, humidity, altitude, sand/dust, transportation, cold storage: -60 °F, salt spray, fungus.

Technical Manuals		
manual type	Army	Air Force
Operators Manual	TM 9-6115-643-10	TO 35C2-3-455-11
Unit, Direct Support	TM 9-6115-643-24	TO 35C2-3-455-22
Repair Parts and Special Tools List	TM 9-6115-643-24P	
Lubrication Order	LO 9-6115-643-12	
Warranty Technical Order	TB 9-6115-643-24	

Maintenance ratio: less than 0.05

Noise: 70 dBA @ 7 meters (23 ft).

Human Factors: MIL-STD-1474.

Optional Equipment: None

FIGURE A-14 15 kW Tactical Quiet Generator

APPENDIX A
CHARACTERISTICS DATA SHEET
15 kW TACTICAL QUIET GENERATOR



MEP-804A or MEP-814A

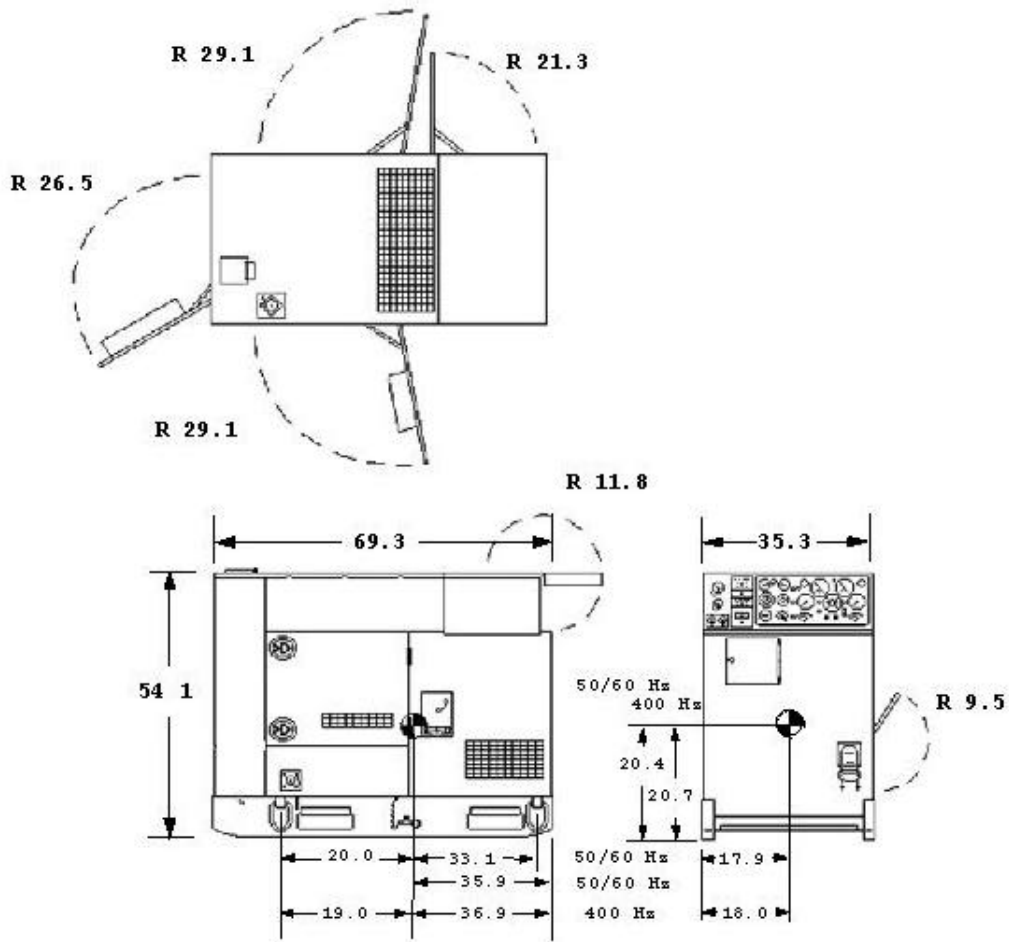


FIGURE A-14 15 kW Tactical Quiet Generator - Continued

DRAFT
MIL-HDBK-633F

APPENDIX A
CHARACTERISTICS DATA SHEET

PU-800, TQ POWER UNIT, DED, 15kW, 400 Hz, TRLMTD

NSN	6115-01-317-2137	Dimensions (in.)	165.0 x 94.5 x 83.5
LIN	G78203	Op. Weight	4855 lb.
SSN	M52100	Ship weight	5055 lb
ASSMB	TA-13229E5735	Ship Cube	770 cu ft
SPEC	MIL-P-53132/11	Camouflage	97403-13228E1614

COMPONENT	QTY	FIND	IDENTIFIER
2 1/2 Ton modified Trailer, M200A1	1	1	97403-13214E1257
TQ Generator set, DED, 15 kW, 400 Hz, MEP-814A	1	2	6115-01-274-7393
Accessory box	1	3	97403-13229E7946
Fire extinguisher, 5 lb., A-A-1106	1	4	4210-00-270-4512

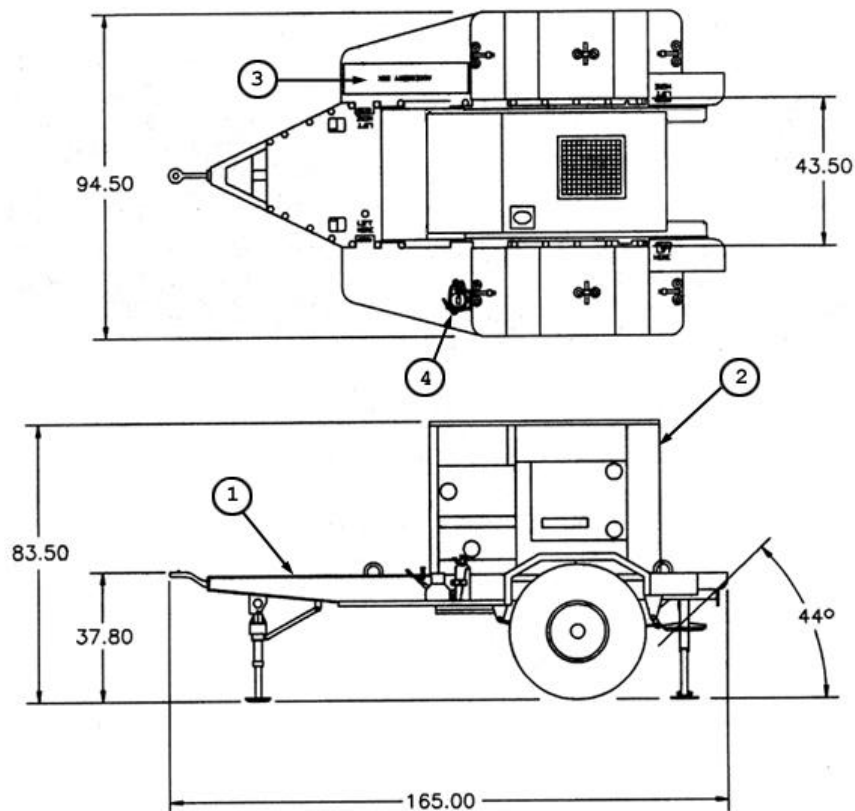


FIGURE A-15 PU-800

DRAFT
MIL-HDBK-633F

APPENDIX A
CHARACTERISTICS DATA SHEET

PU-801*, TQ POWER UNIT, DED, 15kW, 50/60 Hz, TRLMTD

NSN	6115-01-319-9033	Dimensions (in.)	145.0 x 84.3 x 93.4
LIN	G78374	Op. Weight	3180 lb.
SSN	M500	Ship weight	3380 lb
ASSMB	TA-13229E5640	Ship Cube	520 cu ft
SPEC	MIL-P-53132/12	Camouflage	97403-13228E1613

COMPONENT	QTY	FIND	IDENTIFIER
3/4 Ton modified Trailer*, M116A3	1	1	97403-13229E5757
TQ Gen set, DED, 15 kW, 50/60 Hz, MEP-804A	1	2	6115-01-274-7388
Accessory box	1	3	97403-13229E7946
Fire extinguisher, 5 lb., A-A-1106	1	4	4210-00-270-4512

* Some PU-801As, NSN: 6115-01-413-3821, which use a High Mobility Trailer in lieu of the M116A3, were fielded but are no longer manufactured.

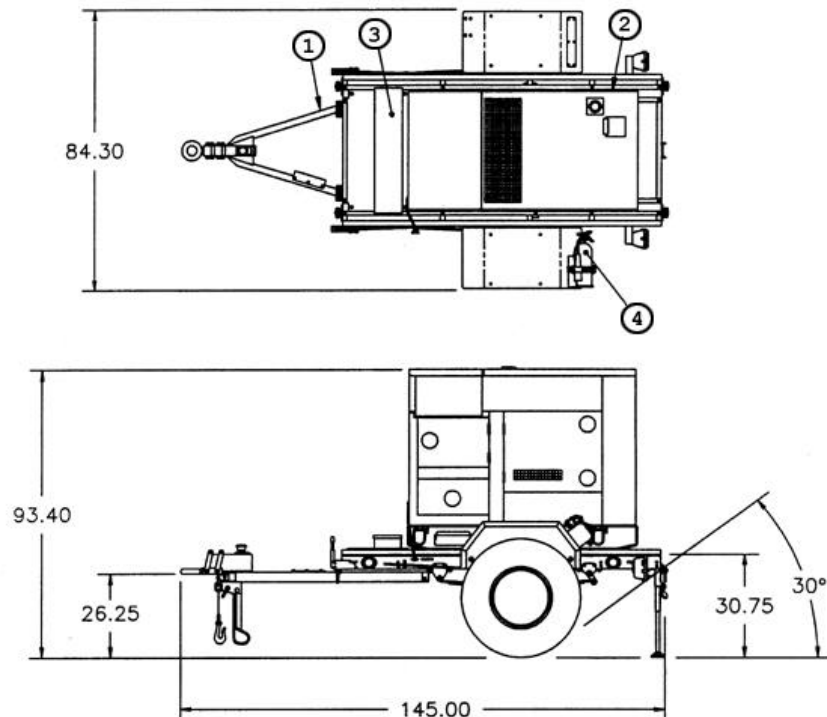


FIGURE A-16 PU-801

DRAFT
MIL-HDBK-633F

APPENDIX A
CHARACTERISTICS DATA SHEET

PU-802, TQ POWER UNIT, DED, 15kW, 50/60 Hz, TRLMTD

NSN	6115-01-317-2138	Dimensions (in.)	165.0 x 94.5 x 83.5
LIN	G53778	Op. Weight	4920 lb.
SSN	M50000	Ship weight	5120 lb
ASSMB	TA-13229E5740	Ship Cube	520 cu ft
SPEC	MIL-P-53132/13	Camouflage	97403-13228E1614

COMPONENT	QTY	FIND	IDENTIFIER
2-1/2 Ton modified trailer, M200A1	1	1	97403-13214E1257
TQ Gen set, DED, 15 kW, 50/60 Hz, MEP-804A	1	2	6115-01-274-7388
Accessory box	1	3	97403-13229E7946
Fire extinguisher, 5 lb., A-A-1106	1	4	4210-00-270-4512

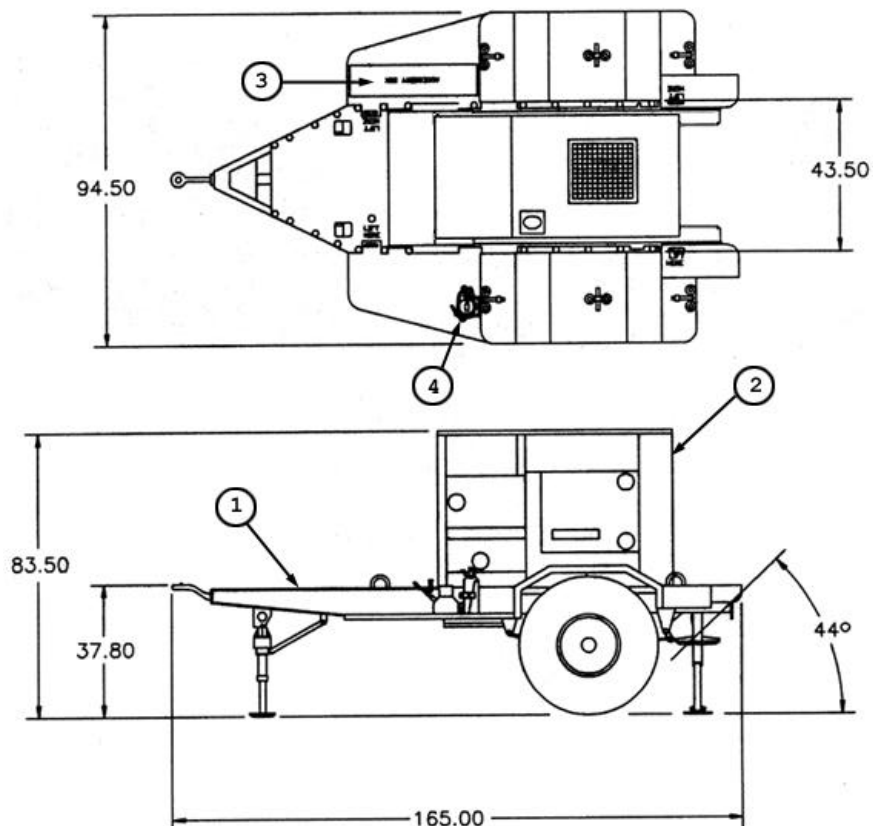


FIGURE A-17 PU-802

DRAFT
MIL-HDBK-633F

APPENDIX A
CHARACTERISTICS DATA SHEET

PP-AN/MJQ-39, TQ POWER PLANT, DED, 15kW, 400 Hz, TRLMTD

NSN	6115-01-299-6034	Dimensions (in)	165.0 x 94.5 x 83.5 each unit
LIN	P42614	Oper Weight	4863/4893 lb (unit A/unit B)
SSN	M56300	Ship weight	5865/5895 lb (unit A/unit B)
ASSMB	TA-13229E5690	Ship Cube	770 cu ft (each)
SPEC	MIL-P-53132/10	Camouflage	97403-13228E1614

COMPONENT	QTY	FIND	IDENTIFIER
2-1/2 Ton modified trailer, M200A1	2	1	97403-13214E1257
TQ Gen set, DED, 15 kW, 400 Hz, MEP-814A	2	2	6115-01-274-7393
Accessory box	2	3	97403-13229E7946
Fire extinguisher, 5 lb., A-A-1106	2	4	4210-00-270-4512
Switch box (unit A)	1	5	97403-13229E5795
Cable assembly (unit B)	1	6	97403-13229E5674
Paralleling cable assembly, 30554-88-22209	2	7	

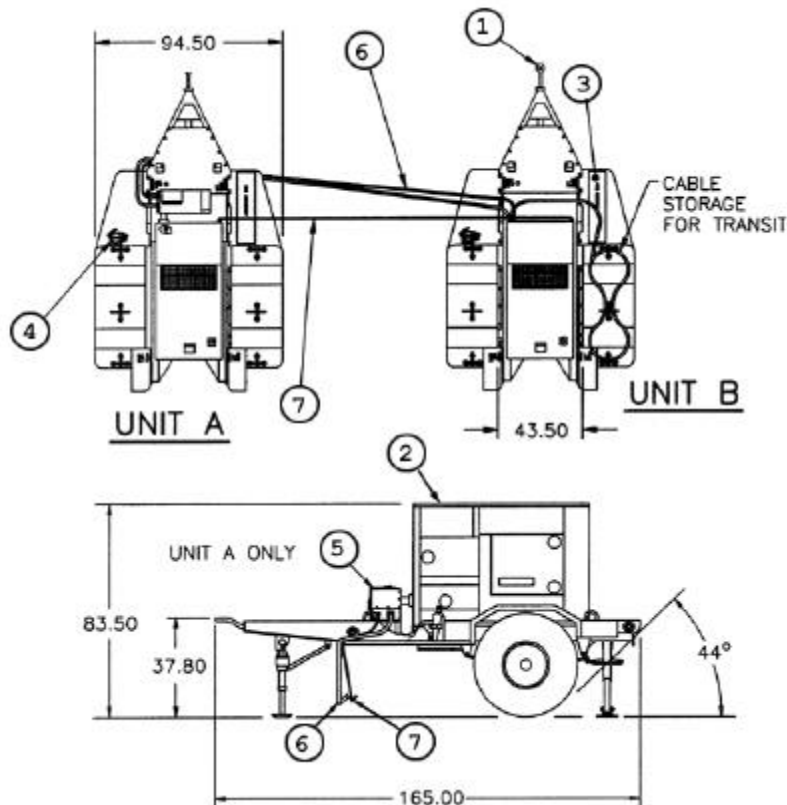


FIGURE A-18 PP-AN/MJQ-39

DRAFT
MIL-HDBK-633F

APPENDIX A
CHARACTERISTICS DATA SHEET
30 kW TACTICAL QUIET GENERATOR

Nomenclature	Gen Set, 30kW, DED, 50/60 Hz	Gen Set, 30kW, DED, 400 Hz
Model Number	MEP-805A	MEP-815A
NSN	6115-01-274-7389	6115-01-274-7394
LIN	G74575	G74643
SSN	M532	M50100
Specification	MIL-DTL-53133/7	MIL-DTL-53133/8
Wet Weight	3006 lb.	3015 lb.
fuel consumption	2.43 gal/hour	2.69 gal/hour
Reliability	600 hr MTBOMF	510 hr MTBOMF
Trailer mounted configurations	PU-803, FIG A-20 PP-AN/MJQ-40, FIG A22	PU-804, FIG A-21

Dimensions: LxWxH (in.): 79.3 x 35.3 x 54.1; Cube: 88 cu. ft.

Engine: John Deer - Model: 4039T 4 cyl Turbo Diesel, 92 hp @ 1800 RPM, 24 VDC starter, liquid cooled.

Fuels: Diesel DL-1, DL-2 and jet fuel JP-8, Jet A-1. Fuel capacity: 23 gal.

Electrical: Drip proof generator enclosure, fungus & moisture treated, solid state voltage regulator, solderless connectors, Marathon Electric synchronous rotating field generator.

Voltage connection: Adjustment	50 Hz	60 Hz	400 Hz
120/208 V, 3 phase, 4 wire	190-213 V	197-240 V	197-229 V
240/416 V, 3 phase, 4 wire	380-426 V	395-480 V	395-458 V
Frequency adjustment	48-52 Hz	58-62 Hz	390-420 Hz

Electric Power Rating: 30 kW, 0.8 power factor @ 4000 ft/120 °F. Derate: 3.5%/1000 ft (4000 - 8000 ft). Max Power: 110% of rated power.

Electric Power Quality	Voltage	Frequency
Regulation (max)	1%	0.25%
Modulation (max)	1%	
Short term steady st stability (30 sec)	1% bandwidth	0.5% bandwidth
Long term steady state stability (4 hr)	1% bandwidth	1% bandwidth
Application, rejection of rated load (transient); recovery:	15% dip, 15% rise 0.5 sec	50/60: 4% u/o, 2 sec
motor load (low power factor) recovery	30% (25%- 400) dip; 0.7 sec to 95% int V	400: 1.5% u/o, 1 sec
Max waveform deviation factor	5%	
Individual waveform harmonic	2%	

Protective Devices: Automatic shut down with emergency bypass for low oil pressure, coolant high temperature, overspeed, and overvoltage.

Instrumentation: On/off switch, Hour, volt, frequency, oil pressure, coolant temperature.

EMI: Suppressed to MIL-STD-461 limits. EMP: HAEMP IAW MIL-STD-2169.

Technical Manuals			
	ARMY: TM 9-	AF: TO	MC: TM
Operators	6115-644-10	35C2-3-446-11	09249A/0924A-10/2
Unit, DS, GS	6115-644-24	35C2-3-446-12	09249A/09246A-24/2
Lube Order	LO 9-6115-644-12		
Warranty	TB 9-6115-644-24		

Environmental Capability: -25 °F to 120 °F, rain, humidity, altitude, sand/dust, transportation, cold storage: -60 °F, salt spray, fungus.

Noise: 70 dBA @ 7 meters (23 ft).

Human Factors: MIL-STD-1474.

Maintenance ratio: less than 0.05

Optional Equipment: None

FIGURE A-19 30 kW Tactical Quiet Generator

APPENDIX A
CHARACTERISTICS DATA SHEET
30 kW TACTICAL QUIET GENERATOR



MEP-805A or MEP-815A

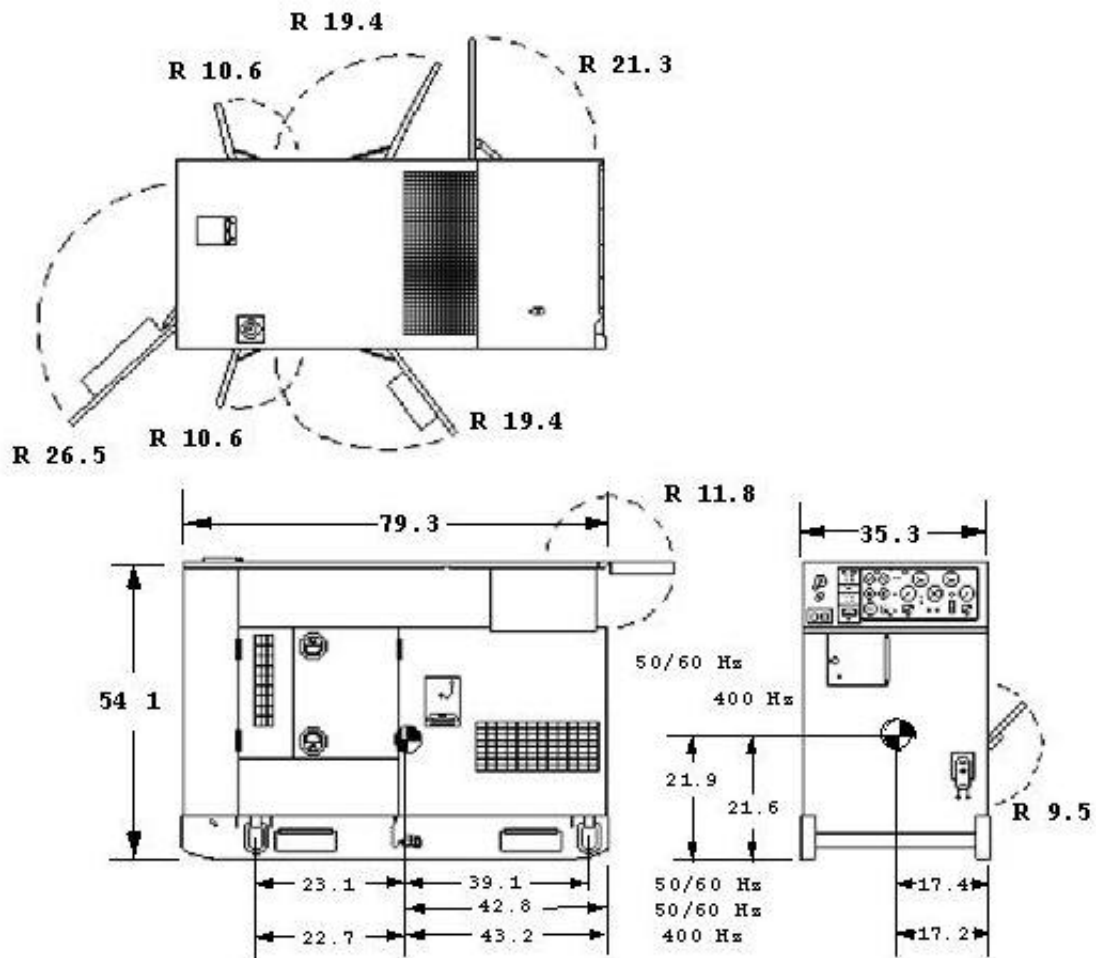


FIGURE A-19 30 kW Tactical Quiet Generator - Continued

DRAFT
MIL-HDBK-633F

APPENDIX A
CHARACTERISTICS DATA SHEET

PU-803, TQ POWER UNIT, DED, 30kW, 50/60 Hz, TRLMTD

NSN	6115-01-317-2136	Dimensions (in.)	165.0 x 94.5 x 83.5
LIN	G35851	Op. Weight	5700 lb.
SSN	M54300	Ship weight	5900 lb
ASSMB	TA-13229E5745	Ship Cube	770 cu ft
SPEC	MIL-P-53132/15	Camouflage	97403-13228E1615

COMPONENT	QTY	FIND	IDENTIFIER
2-1/2 Ton modified trailer, M200A1	1	1	97403-13214E1257
TQ Gen set, DED, 30 kW, 50/60 Hz, MEP-805A	1	2	6115-01-274-7389
Accessory box	1	3	97403-13229E7946
Fire extinguisher, 5 lb., A-A-1106	1	4	4210-00-270-4512

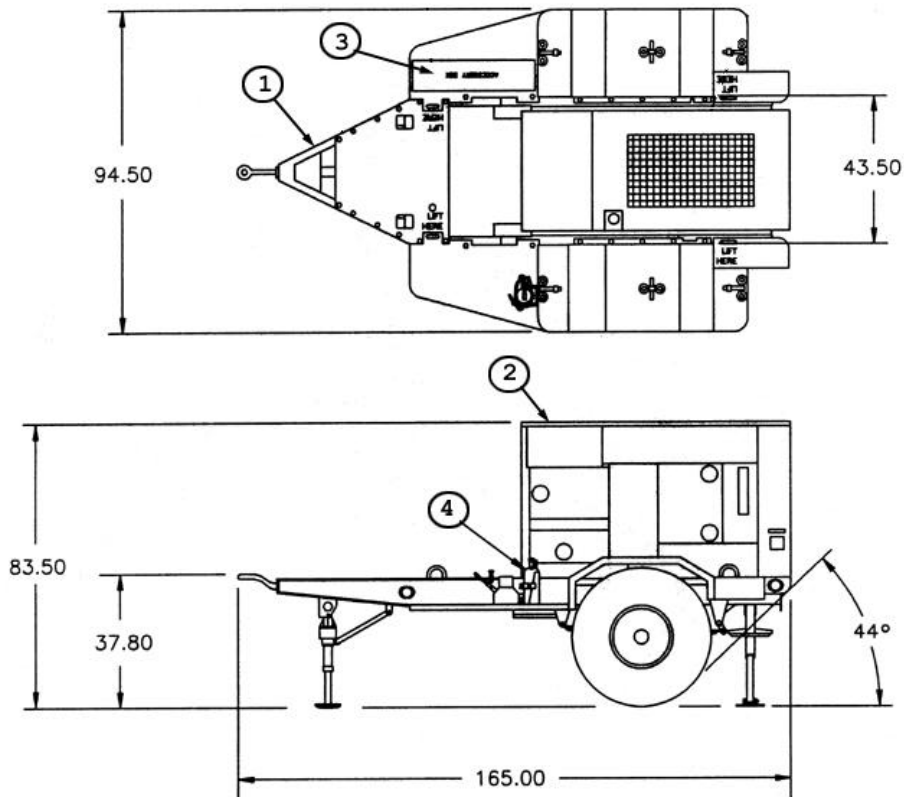


FIGURE A-20 PU-803

DRAFT
MIL-HDBK-633F

APPENDIX A
CHARACTERISTICS DATA SHEET

PU-804, TQ POWER UNIT, DED, 30kW, 400 Hz, TRLMTD

NSN	6115-01-317-2135	Dimensions (in.)	165.0 x 94.5 x 83.5
LIN	G35919	Op. Weight	5730 lb.
SSN	M59500	Ship weight	5930 lb
ASSMB	TA-13229E5750	Ship Cube	770 cu ft
SPEC	MIL-P-53132/16	Camouflage	97403-13228E1615

COMPONENT	QTY	FIND	IDENTIFIER
2-1/2 Ton modified trailer, M200A1	1	1	97403-13214E1257
TQ Generator set, DED, 30 kW, 400 Hz, MEP-815A	1	2	6115-01-274-7394
Accessory box	1	3	97403-13229E7946
Fire extinguisher, 5 lb., A-A-1106	1	4	4210-00-270-4512

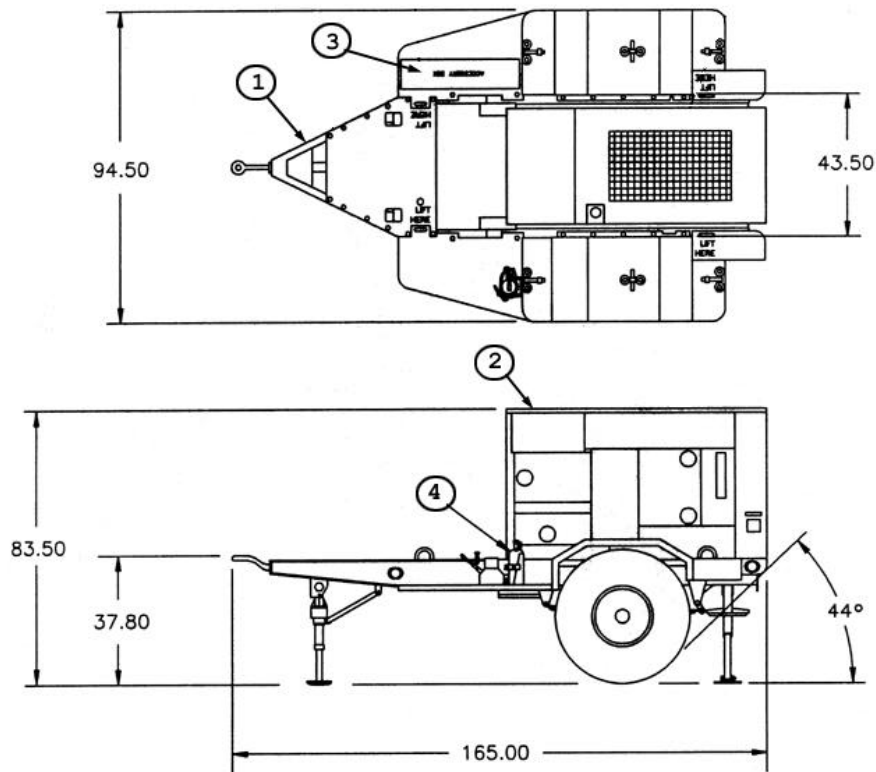


FIGURE A-21 PU-804

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APPENDIX A
CHARACTERISTICS DATA SHEET

PP-AN/MJQ-40, TQ POWER PLANT, DED, 30kW, 50/60 Hz, TRLMTD

NSN	6115-01-299-6033	Dimensions (in.)	165.0x94.5x83.5 each
LIN	P42126	Op. Weight	5700/5740 lb(unit A/unit B)
SSN	M51900	Ship weight	6700/6740 lb (unit A/unit B)
ASSMB	TA-13229E5700	Ship Cube	770 cu ft (x2)
SPEC	MIL-P-53132/14	Camouflage	97403-13228E1615

COMPONENT	QTY	FIND	IDENTIFIER
2-1/2 Ton modified trailer, M200A1	2	1	97403-13214E1257
Generator set, TQ DED, 30 kW, 50/60 Hz, MEP-805A	2	2	6115-01-274-7389
Accessory box	2	3	97403-13229E7946
Fire extinguisher, 5 lb., A-A-1106	2	4	4210-00-270-4512
Switch box (unit A)	1	5	97403-13229E5795
Cable assembly (unit B)	1	6	97403-13229E5738
Paralleling cable assembly, 30554-88-22209	2	7	

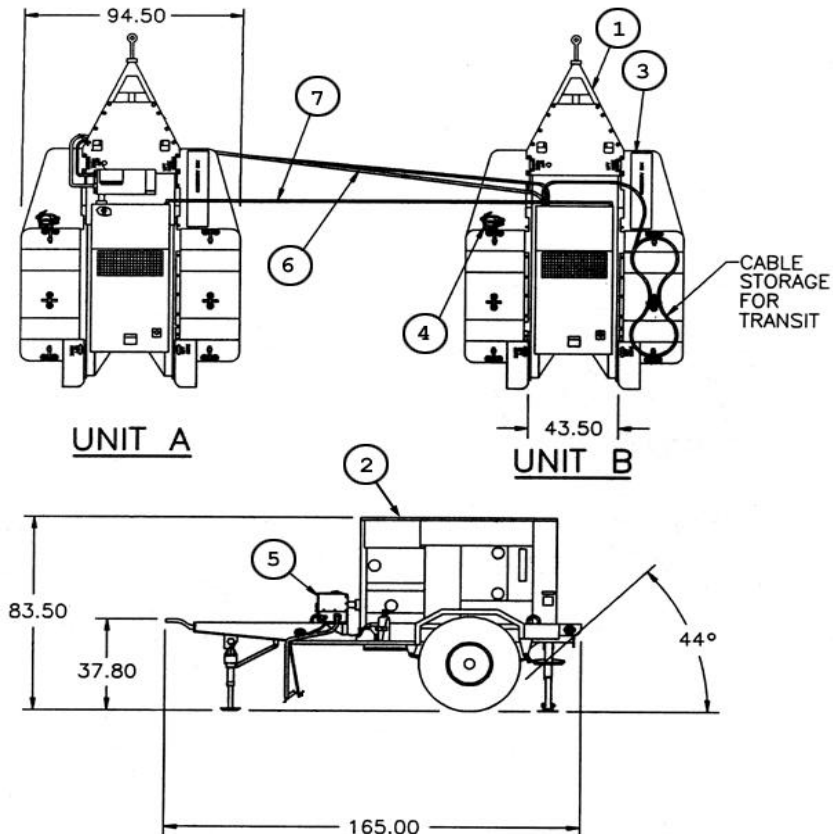


FIGURE A-22 PP-AN/MJQ-40

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APPENDIX A
CHARACTERISTICS DATA SHEET
60 kW TACTICAL QUIET GENERATOR

Nomenclature	Gen Set, 60kW, DED, 50/60 Hz	Gen Set, 60kW, DED, 400 Hz
Model Number	MEP-806A	MEP-816A
NSN	6115-01-274-7390	6115-01-274-7395
LIN	G12034	G18052
SSN	M53400	M53100
Specification	MIL-DTL-53133/9	MIL-DTL-53133/10
Wet Weight	4063 lb.	4153 lb.
Fuel consumption	4.51 gal/hour	4.99 gal/hour
Reliability	488 hr MTBOMF	361 hr MTBOMF
Trailer mounted configurations	PU-805, FIG A-24 PP-AN/MJQ-41, FIG A-26 PP-AN/MJQ-1612, FIG A-27	PU-806 FIG A-25 PP-AN/MJQ-1610, FIG A-27

Dimensions: LxWxH (in.): 86.3 x 35.3 x 58.2; Cube: 103 cu. ft.

Engine: John Deer Model 6059T 6 cyl Turbo Diesel, 134 horsepower @ 1800 RPM, 24 VDC starter, liquid cooled, electronic governor.

Fuels: Diesel DL-1, DL-2 and jet fuel JP-8, Jet A-1. Fuel capacity: 43 gal.

Electrical: Drip proof generator enclosure, fungus & moisture treated, solid state voltage regulator, solderless connectors, Marathon/Lima brushless generator.

Voltage connection: Adjustment	50 Hz	60 Hz	400 Hz
120/208 V, 3 phase, 4 wire	190-213 V	197-240 V	197-229 V
240/416 V, 3 phase, 4 wire	380-426 V	395-480 V	395-458 V
Frequency adjustment	48-52 Hz	58-62 Hz	390-420 Hz

Electric Power Rating: 30 kW, 0.8 power factor @ 4000 ft/120 °F. Derate: 3.5%/1000 ft (4000 - 8000 ft). Max Power: 110% of rated power.

Electric Power Quality	Voltage	Frequency
Regulation (max)	1%	0.25%
Modulation (max)	1%	
Short term steady state stability (30 sec)	1% bandwidth	0.5% bandwidth
Long term steady state stability (4 hr)	2% bandwidth	1% bandwidth
Application, rejection of rated load (transient); recovery:	15% dip, 15% rise 0.5 sec	50/60: 4% u/o, 2 sec
motor load (low power factor) recovery	30% (25%- 400) dip; 0.7 sec to 95% int V	400: 1.5% u/o, 1 sec
Max waveform deviation factor	5%	
Individual waveform harmonic	2%	

Protective Devices: Automatic shut down with emergency bypass for low oil pressure, coolant high temperature, overspeed, and overvoltage.

Instrumentation: On/off switch, Hour, volt, frequency, oil pressure, coolant temperature.

EMI: Suppressed to MIL-STD-461 limits. EMP: HAEMP IAW MIL-STD-2169.

Maintenance ratio: less than 0.05

Technical Manuals			
	ARMY: TM 9-	AF: TO	USMC: TM
Operators	6115-645-10	35C2-3-444-11	09244A/09245A-10/2
Unit, DS, GS	6115-645-24	35C2-3-444-12	09244A/09245A-24/2
Lube order	LO 9-6115-645-12		
Warranty	TB 9-6115-645-24		

Environmental Capability: -25 °F to 125 °F, rain, humidity, altitude, sand/dust, transportation, cold storage: -60 °F, salt spray, fungus.

Noise: 70 dBA @ 7 meters (23 ft).

Human Factors: MIL-STD-1474.

FIGURE A-23 60 kW Tactical Quiet Generator

APPENDIX A
CHARACTERISTICS DATA SHEET
60 kW TACTICAL QUIET GENERATOR



MEP-806A or MEP-816A

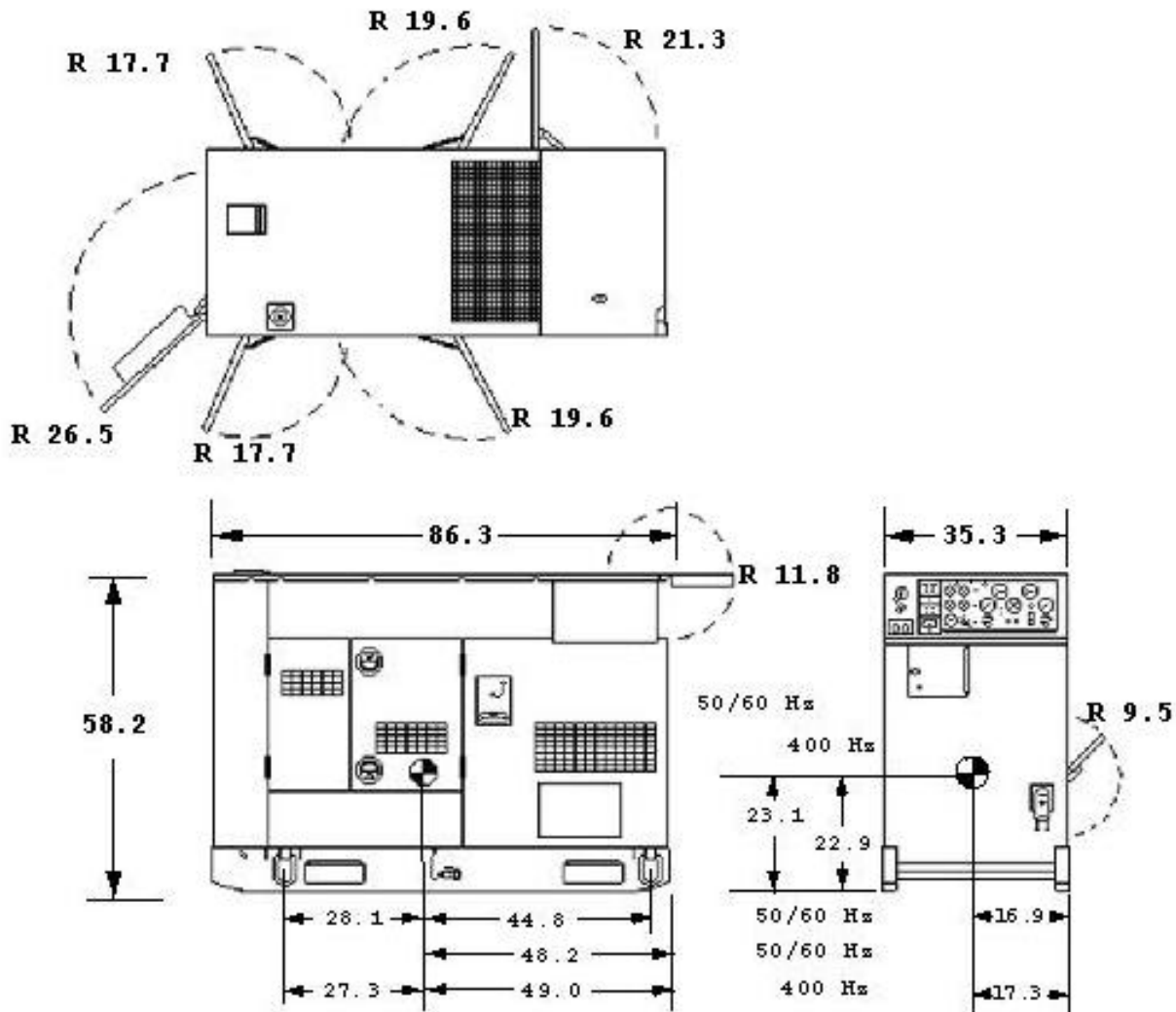


FIGURE A-23 60 kW Tactical Quiet Generator - Continued

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APPENDIX A
CHARACTERISTICS DATA SHEET

PU-805, TQ POWER UNIT, DED, 60kW, 50/60 Hz, TRLMTD

NSN	6115-01-317-2134	Dimensions (in.)	165.0 x 94.5 x 86.3
LIN	G78306	Op. Weight	6720 lb.
SSN	M50900	Ship weight	6920 lb
ASSMB	TA-13229E5755	Ship Cube	770 cu ft
SPEC	MIL-P-53132/18	Camouflage	97403-13228E1616

COMPONENT	QTY	FIND	IDENTIFIER
2-1/2 Ton modified trailer, M200A1	1	1	97403-13214E1257
TQ Gen set, DED, 60 kW, 50/60 Hz, MEP-806A	1	2	6115-01-274-7390
Accessory box	1	3	97403-13229E7946
Fire extinguisher, 5 lb., A-A-1106	1	4	4210-00-270-4512

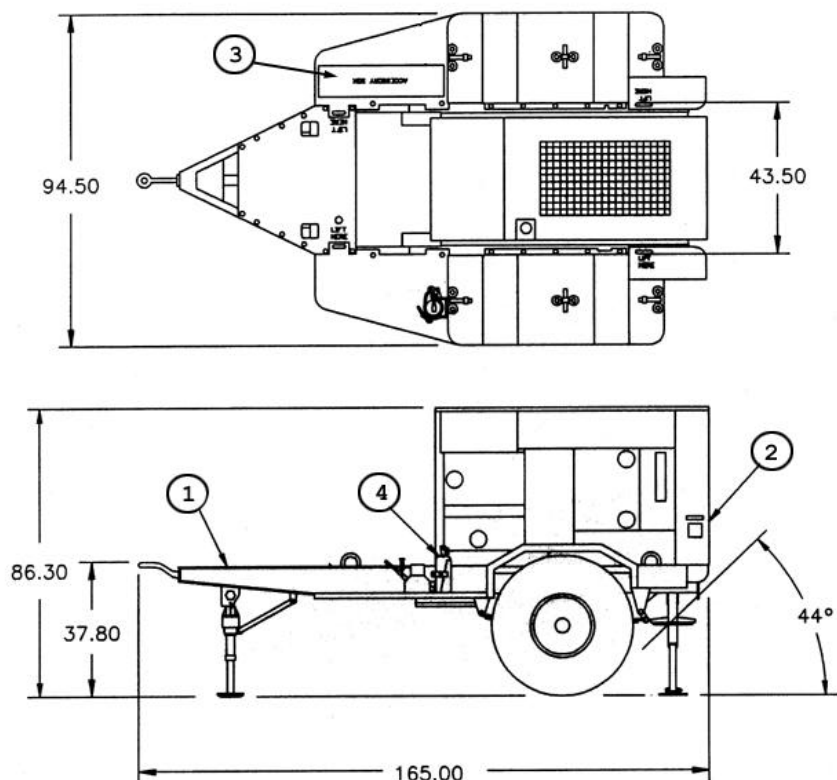


FIGURE A-24 PU-805

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APPENDIX A
CHARACTERISTICS DATA SHEET

PU-806, TQ POWER UNIT, DED, 60kW, 400 Hz, TRLMTD

NSN	6115-01-317-2133	Dimensions (in.)	165.0 x 94.5 x 86.3
LIN	G17460	Op. Weight	6815 lb.
SSN	M51000	Ship weight	7015 lb
ASSMB	TA-13229E5760	Ship Cube	770 cu ft
SPEC	MIL-P-53132/19	Camouflage	97403-13228E1616

COMPONENT	QTY	FIND	IDENTIFIER
2-1/2 Ton modified trailer, M200A1	1	1	97403-13214E1257
Generator set, TQ DED, 60 kW, 400 Hz, MEP-816A	1	2	6115-01-274-7395
Accessory box	1	3	97403-13229E7946
Fire extinguisher, 5 lb., A-A-1106	1	4	4210-00-270-4512

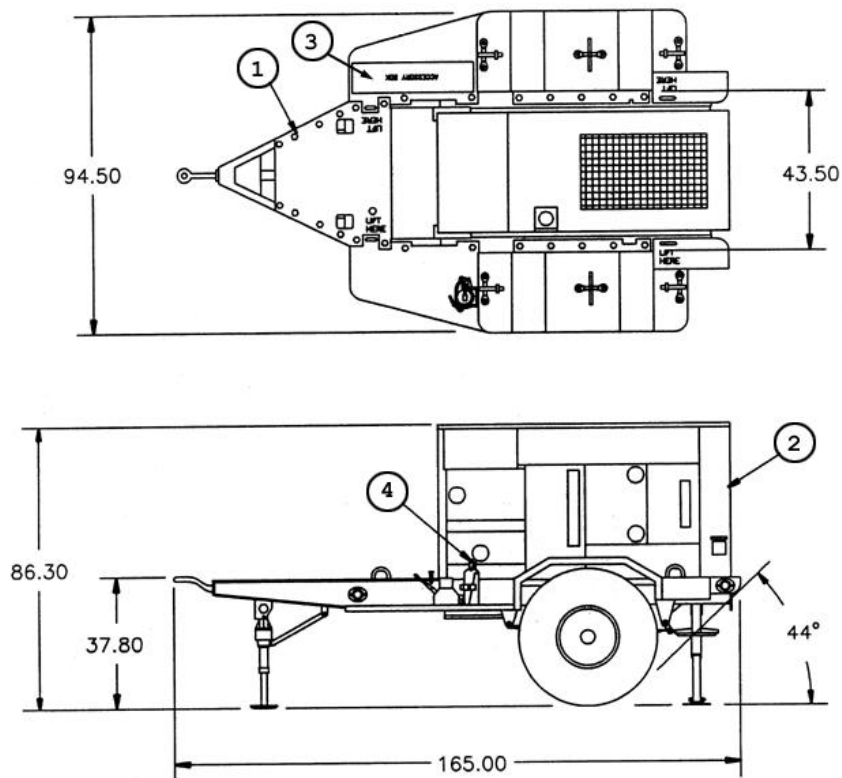


FIGURE A-25 PU-806

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APPENDIX A
CHARACTERISTICS DATA SHEET

PP-AN/MJQ-41, TQ POWER PLANT, DED, 60kW, 50/60 Hz, TRLMTD

NSN	6115-01-303-7896	Dimensions (in.)	165.0 x 94.5 x 86.3 (x2)
LIN	P42194	Op. Weight	6695/6745 lb (unit A/unit B)
SSN	M51100	Ship weight	7695/7745 lb (unit A/unit B)
ASSMB	TA-13229E5710	Ship Cube	770 cu ft (x2)
SPEC	MIL-P-53132/17	Camouflage	97403-13228E1616

COMPONENT	QTY	FIND	IDENTIFIER
2-1/2 Ton modified trailer, M200A1	2	1	97403-13214E1257
Generator set, TQ DED, 60 kW, 400 Hz, MEP-806A	2	2	6115-01-274-7390
Accessory box	2	3	97403-13229E7946
Fire extinguisher, 5 lb., A-A-1106	2	4	4210-00-270-4512
Switch box (unit A)	1	5	97403-13229E5795
Cable assembly (unit B)	1	6	97403-13229E5741
Paralleling cable assembly, 30554-88-22209	2	7	

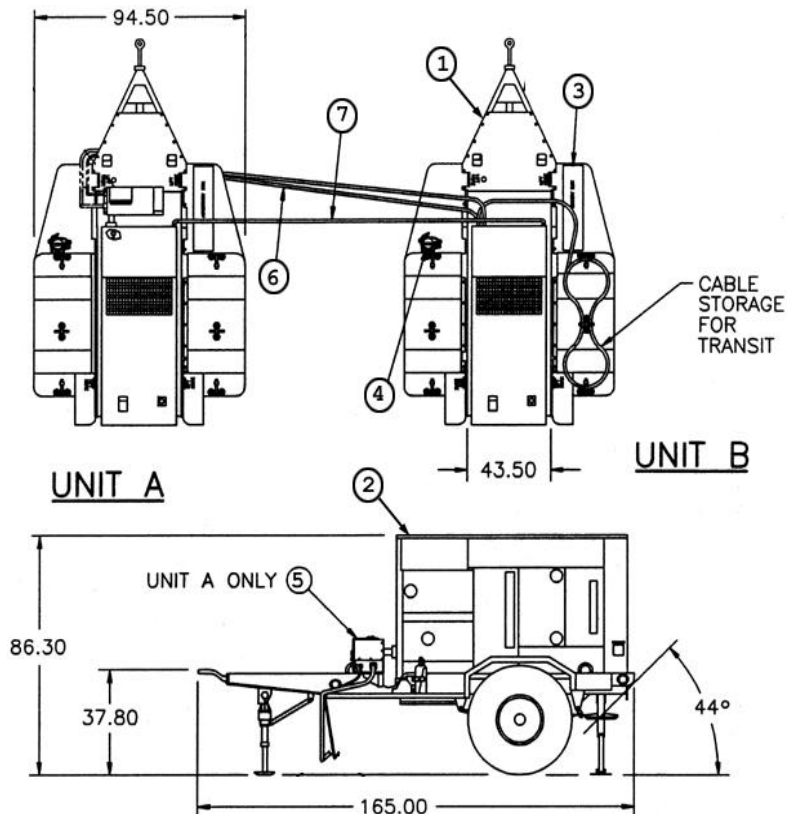


FIGURE A-26 PP-AN/MJQ-41

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APPENDIX A
CHARACTERISTICS DATA SHEET
PP-AN/MJQ-1610, TQ POWER PLANT, DED, 60kW, 400 Hz, TRMLTD
AIR FORCE POWER PLANT - NOT TYPE CLASSIFIED FOR ARMY USE

NSN		Dimensions (in.)	222.6 x 96.0 x 96.0
LIN		Op. Weight	14700 lb.
SSN	M510	Ship weight	15800 lb
ASSMB	TA-13229E4595	Ship Cube	1172 cu ft
SPEC		Camouflage	97403-13228E1617

COMPONENT	QTY	FIND	IDENTIFIER
5 Ton modified trailer, M106E1	1	1	
Generator set, TQ DED, 60 kW, 400 Hz, MEP-816A	2	2	6115-01-274-7395
Accessory box	1	3	97403-13229E7946
Fire extinguisher, 5 lb., A-A-1106	2	4	4210-00-270-4512
Switch box	1	5	97403-13230E4550
Cable storage box	1	6	97403-13230E4580

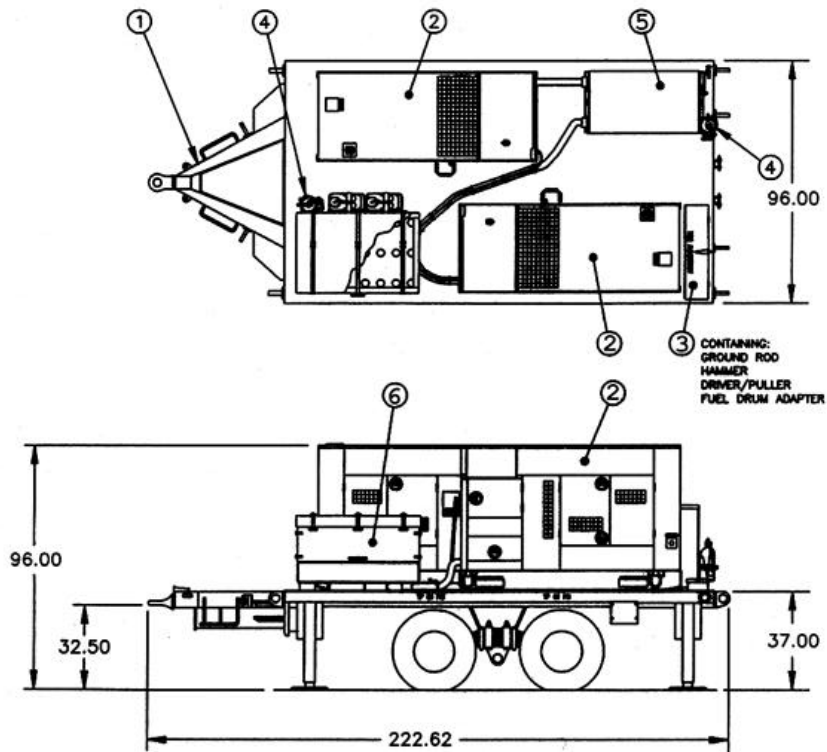
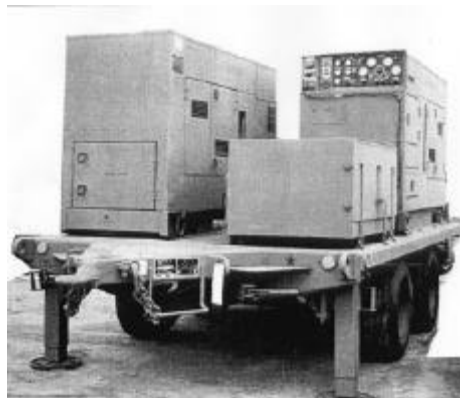


FIGURE A-27 PP-AN/MJQ-1610

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APPENDIX A
CHARACTERISTICS DATA SHEET

PP-AN/MJQ-1612, TQ POWER PLANT, DED, 60kW, 50/60 Hz, TRLMTD
AIR FORCE POWER PLANT - NOT TYPE CLASSIFIED FOR ARMY USE

NSN	6115-01-349-1536	Dimensions (in.)	222.6 x 96.0 x 96.0
LIN		Op. Weight	14700 lb.
SSN	M510	Ship weight	15800 lb
ASSMB	TA-13229E9635	Ship Cube	1172 cu ft
SPEC		Camouflage	97403-13228E1617

COMPONENT	QTY	FIND	IDENTIFIER
5 Ton modified trailer, M106E1	1	1	
TQ Gen set, DED, 60 kW, 50/60 Hz, MEP-806A	2	2	6115-01-274-7390
Accessory box	1	3	97403-13229E7946
Fire extinguisher, 5 lb., A-A-1106	2	4	4210-00-270-4512
Switch box	1	5	97403-13230E4550
Cable storage box	1	6	97403-13230E4580

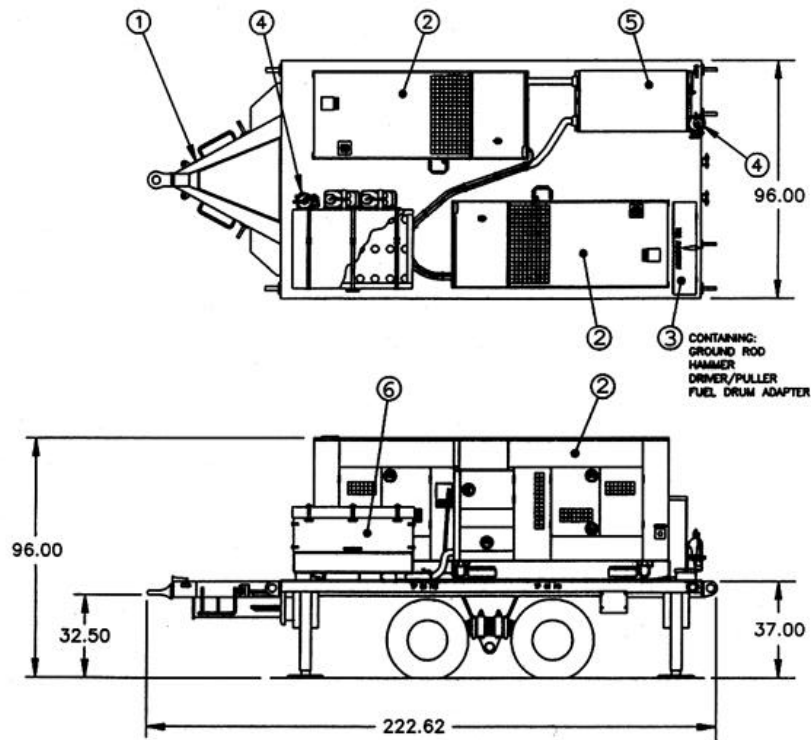


FIGURE A-28 PP-AN/MJQ-1612

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APPENDIX A
CHARACTERISTICS DATA SHEET
100 kW TACTICAL QUIET GENERATOR

DEVELOPMENT SCHEDULE NOT YET ESTABLISHED

SEE APPENDIX E FOR EXISTING MEPGS IN INVENTORY BUT NOT PROCURABLE

Nomenclature	Gen Set, 100kW, DED, 50/60 Hz	Gen Set, 100kW, DED, 400 Hz
Model Number	MEP-808A	MEP-818A
NSN	6115-01-296-1463	not yet assigned
LIN		
SSN		
Dry Weight	TBD lb.	TBD lb.
Wet Weight	TBD lb.	TBD lb.
fuel consumption	TBD gal/hour	TBD gal/hour
Trailer mounted configurations	PU-807 PP-AN/MJQ-44	PU-808 PP-AN/MJQ-45

Dimensions: L x W x H (in): TBD; Cube: TBD cu. ft.

Engine: Diesel, TBD horsepower @ TBD RPM, Model: TBD, 28 VDC starter.

Fuels: Diesel DL-1, DL-2 and jet fuels JP-5, JP-8, Jet A-1.

Fuel tank capacity: TBD gallons. Fuel consumption: TBD gal/hour

Electrical: TBD

Voltage Connection: 3 phase: 120/208 V - 4 wire, 240/416 V - 4 wire.

Reliability: TBD Hr. MTBOMF

Maintenance Ratio: TBD - organization; TBD - direct support.

Protective Devices: TBD.

Instrumentation: TBD

EMI: Suppressed to MIL-STD-461 limits. EMP: HAEMP protected.

Electric Power Quality: MIL-STD-1332

Electric Power Rating: 100 kW, 0.8 power factor @ 4000 ft/95 °F.

Environmental Capability: -25 °F to 120 °F, plus PD requirements.

Noise: 70 dBA @ 7 meters (23 ft).

Human Factors: MIL-STD-1474.

Optional Equipment: TBD

Technical Manuals: TBD

Characteristics, photographs, drawings and details of any Power Unit/Power Plant configurations will be included when available.

FIGURE A-29 100 kW Tactical Quiet Generator Sets

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APPENDIX A
CHARACTERISTICS DATA SHEET
200 kW TACTICAL QUIET GENERATOR

DEVELOPMENT SCHEDULE NOT YET ESTABLISHED

SEE APPENDIX E FOR EXISTING MEPGS IN INVENTORY BUT NOT PROCURABLE

Nomenclature	Gen Set, 200kW, DED, 50/60 Hz
Model Number	MEP-809A
NSN	6115-01-296-1462
LIN	
SSN	
Dry Weight	TBD lb.
Wet Weight	TBD lb.
fuel consumption	TBD gal/hour
Trailer mounted configurations	PU-809 PP-AN/MJQ-46

Dimensions: LxWxH (in.): TBD; Cube: TBD cu. ft.

Engine: Diesel, TBD horsepower @ 1800 RPM, Model: TBD, 28 VDC starter.

Fuels: Diesel DL-1, DL-2 and jet fuels JP-5, JP-8, Jet A-1.

Fuel tank capacity: TBD gallons.

Electrical: TBD

Voltage Connection: 3 phase: 120/208 V - 4 wire, 240/416 V - 4 wire.

Reliability: TBD Hr. MTBOMF

Maintenance Ratio: TBD - organization; TBD - direct support.

Protective Devices: TBD.

Instrumentation: TBD

EMI: Suppressed to MIL-STD-461 limits. EMP: HAEMP protected.

Electric Power Quality: MIL-STD-1332

Electric Power Rating: 200 kW, 0.8 power factor @ 4000 ft/95 °F.

Environmental Capability: -25 °F to 120 °F, plus PD requirements.

Noise: 70 dBA @ 7 meters (23 ft).

Human Factors: MIL-STD-1474.

Optional Equipment: None

Technical Manuals:

Characteristics, photographs, drawings and details of any Power Unit/Power Plant configurations will be included when available.

FIGURE A-30 200 kW Tactical Quiet Generator Sets

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APPENDIX A
CHARACTERISTICS DATA SHEET
LARGE kW PRIME POWER GENERATOR SET

TO BE DEVELOPED*

SEE APPENDIX E FOR EXISTING MEPGS IN INVENTORY BUT NOT PROCURABLE

Nomenclature	Gen Set, 500 kW or greater, DED, 50/60 Hz
Model Number	TBD
NSN	6115-01-296-1462
LIN	
SSN	
Weight	TBD lb.
fuel consumption	TBD gal/hour
Mobilization configuration	Air, road, rail transportable.

Dimensions: TBD

Engine: Diesel, TBD horsepower @ XXX RPM, Model: TBD, 28 VDC starter.

Fuels: Diesel DL-1, DL-2 and jet fuels JP-5, JP-8, Jet A-1.

Fuel tank capacity: TBD gallons.

Electrical: TBD

Voltage Connection: 3 phase: XXXX/XXXX V - 4 wire, XXXX/XXXX V - 4 wire.

Reliability: TBD

Protective Devices: TBD.

Instrumentation: TBD

EMI: Suppressed to MIL-STD-461 limits. EMP: HAEMP protected.

Electric Power Quality: TBD

Electric Power Rating: TBD.

Environmental Capability: -65 °F to 150 °F for system.

Noise: 70 dBA @ 7 meters (23 ft).

Human Factors: MIL-STD-1474.

Optional Equipment: TBD

Technical Manuals: TBD

*This generator is being developed jointly by the PM, Mobile Electric Power, the USAF Systems Command, USAF Air Combat Command, USA Training and Doctrine Command, and the US Army Prime Power Battalion as the major component of the Deployable Power Generation and Distribution System (DPGDS) to replace the USAF Bare Base electrical system and also the aging Army Prime Power Battalion assets. Development is scheduled to be initiated in FY 98.

Characteristics, photographs, and drawings will be included when available.

FIGURE A-31 Large kW Prime Power Generator Set (DPGDS_)

APPENDIX B
STANDARD FAMILY OF AUXILIARY POWER UNITS (APU)

B.1 SCOPE

B.1.1 Scope. This Appendix identifies the current Auxiliary Power Unit (APU) members of the DoD Standard Family of MEPGS . Data contained in this Appendix is for information only and is provided to assist both field operation and materiel developer personnel to select the power generation source that will best meet their needs. The APUs are not separately fielded items but are part of a vehicle or shelter system. DoD activities are to utilize these power sources to the maximum extent practicable per DoD DIRECTIVE 4120.11.

B.1.2 Appendix Organization. This Appendix is a compilation of characteristics data sheets (see TABLE B-I) arranged by power rating capacity.

TABLE B-I. Guide to CHARACTERISTICS DATA SHEETS of APPENDIX B

MODEL NO.	ITEM DESCRIPTION	NSN	FIG	PAGE
MEP-952	5 kW, 28 VDC, DED/APU	6115-01-317-2139	B-1	59
MEP-903A	10 kW, 60 Hz, DED/APU	6115-01-431-3062	B-2	61

B.2 APPLICABLE DOCUMENTS

This section is not applicable to this Appendix.

B.3 DEFINITIONS

B.3.1 Auxiliary Power Unit (APU). An Auxiliary Power Unit (APU) is a power source consisting of a self-contained engine and generator, including remote controls, capable of producing electrical power when connected to its host's source of fuel and starting power.

B.4 GENERAL DESCRIPTIONS

B.4.1 Item Descriptions.

B.4.1.1 5 kW 28 VDC Auxiliary Power Unit (APU). The 5 kW 28 VDC APU is a newly developed diesel engine driven replacement for the 4.2 kW gasoline engine driven APU used on M577 Armored Personnel Carriers. The old 4.2 kW APUs are noisy, unreliable, difficult to maintain and require an additional fuel (gasoline), not used by other equipment, to be brought to the battlefield. The new 5 kW 28 VDC APU eliminates these problems. More importantly, the 5 kW 28 VDC APU also provides power to the M1068 tracked vehicle, which houses the communications, intelligence and command and control computer suite, a lynch pin in the Army's Force XXI strategy. The APU utilizes a standard NATO slave receptacle to connect to a DC power system. The APU is usually started by the power provided via the NATO slave receptacle, but has a hand crank to start the set if batteries are not charged or available.

B.4.1.2 10 kW, 60 Hz Auxiliary Power Unit (APU). The 10 kW, 60 Hz, 120/240 volt APU was a joint development effort among the Army project managers; PM, Mobile Electric Power (PM, MEP), PM, Joint Tactical Area Communication System (PM, JTACS), PM, Platforms (previously the PM, Standard Integrated Command Post System (PM, SICPS)), and PM, Air Defense Command and Control Systems (PM, ADCCS). The differing rail and tunnel dimensions between the SICPS shelter and the JTACS shelter cause the SICPS APU to be slightly modified (rail and muffler) for the JTACS application. Electrical generation hardware and performance of the JTACS APU are identical to the SICPS APU. The

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APPENDIX B

10 kW APU has a remotely located control panel, usually mounted inside the shelter, that interfaces through the shelter utility tunnel.

B.5 DETAILED DESCRIPTIONS

B.5.1 Detailed Descriptions. Details of these Auxiliary Power Units are contained in the CHARACTERISTICS DATA SHEETS of FIGURES B-1 and B-2.

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APPENDIX B
CHARACTERISTICS DATA SHEET
5 kW, 28VDC, DED, Auxiliary Power Unit (APU)
(Army Unique - Not Separately Type Classified)

Nomenclature	APU, 5 kW, DED, 28VDC
APU	MEP-952A
NSN	6115-01-317-2139
LIN	
SSN	
Wet Weight	550 lb (includes housing)

Used with M557 Armored Personnel Carrier and the M1068 Tracked carriers.
Dimensions (LxWxH): 34.5 x 30.5 x 17.0 in (housed APU for external mounting)
Cube: 11.4 cu ft.

Engine: Farymann - Diesel, 13.2 hp @ 3000 rpm, Air cooled, Electronic governor, Starter: 28 VDC (from NATO slave receptacle) and hand crank (provided). No belts or pulleys.

Fuels: Diesel DL-1, DL-2 and jet fuel JP-8 and Jet A-1. Provided with quick disconnect fuel line. Fuel consumption: 0.42 gal/hour.

Electrical: Uses a Bradley M2/M3, Alternator. Brushless, solid state rectifier, solid state regulator. Capable of 280 amps @ 3000 rpm.

Voltage Connection: 28VDC, NATO slave receptacle.

Electric Power Rating: 5 kW (180 amps, 28 VDC), from -25 °F to 4000 ft/95 °F, derate 17% @ 8000 ft/95 °F.

Electric Power Quality	DC voltage
Regulation	4%
Short term steady st stability (30 sec)	2% bandwidth
Long term steady state stability (4 hr)	2% bandwidth
Application/Rejection of rated load recovery	30% 1 sec
Rejection of rated load (transient) recovery	40% rise 0.5 sec
DC ripple	5.5%
Voltage adjustment range	23 - 35 V

Protective Devices: Automatic shut down with emergency bypass for low oil pressure, engine overtemp.

Instrumentation: Start/prime & run/off switch, emergency stop, volt/current meter (with switch). Local and remote switch for remote operation.

Indicators for power on, high eng temp, low oil, preheat-on. Lamp test.

EMI: Suppressed to MIL-STD-461 limits. EMP: protected.

Environmental Capability: -25 °F to 120 °F, rain, humidity, sand/dust, cold storage -65 °F, salt spray, fungus. Operable at inclines up to 27°.

Noise: 70 dBA @ 7 meters (23 ft).

Human Factors: MIL-STD-1474.

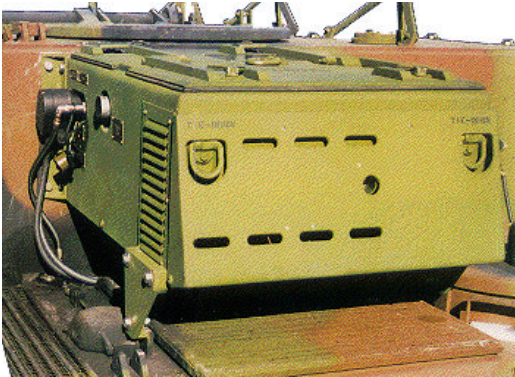
Optional Equipment: None

Technical Manuals: OPERATORS, UNIT, DS, and GS : ARMY: TM 9-6115-664-14

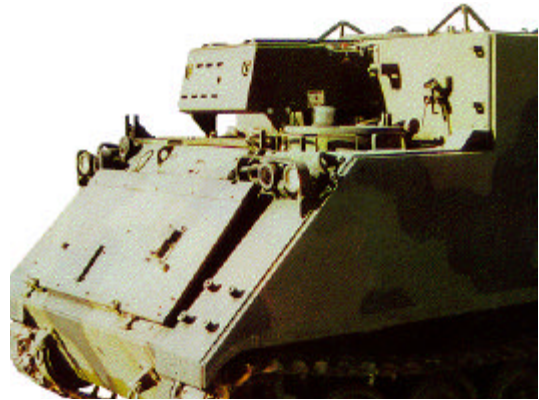
FIGURE B-1 5 kW, 28VDC, DED, Auxiliary Power Unit

APPENDIX B
CHARACTERISTICS DATA SHEET
5 kW, 28VDC, DED, Auxiliary Power Unit (APU)

Photos of Prototype



MEP-952A ON M557
(Power connector side)



MEP-952A ON M557

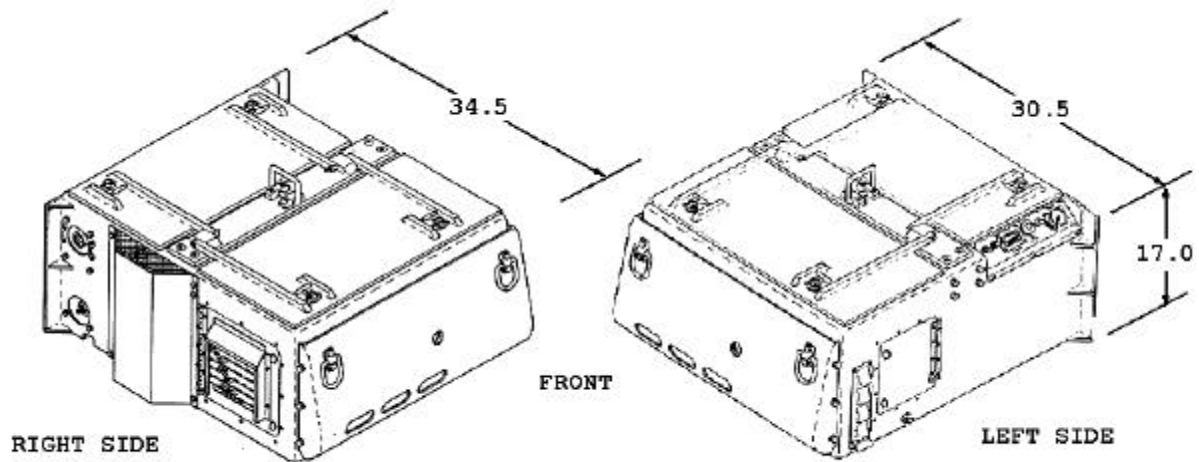


FIGURE B-1 5 kW, 28VDC, DED, Auxiliary Power Unit - Continued

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APPENDIX B
CHARACTERISTICS DATA SHEET
10 kW, 60 Hz, DED, Auxiliary Power Unit (APU)
(Not Separately Type Classified)

Nomenclature	APU, 10 kW, DED, 60 Hz
APU	MEP-903A
NSN	6115-01-431-3062
LIN	
SSN	
Wet Weight	460 lb on rail for shelter tunnel insertion
Dimensions	36 x 26.5 x 27.7, (15.3 cu ft)

Used with SICPS shelter.

Engine: Kubota turbocharged diesel, 22.8 hp @ 3600 rpm, liquid cooled, Electronic governor, Starter: 28 VDC (from vehicle). No belts or pulleys. 20 amp battery charger.

Fuels: Diesel DL-1, DL-2 and jet fuel JP-8 and Jet A-1. Uses vehicle fuel via quick disconnect fuel line. Fuel consumption: 0.?? gal/hour.

Electrical: Alternator: brushless, solid state regulator, 2 pole, 3600 rpm, sealed bearings.

RAM: 400 Hr. MTBOMF

Protective Devices: Automatic shut down with emergency bypass for overspeed, low oil pressure, low fuel (day tank), high coolant temperature, overvoltage, undervoltage, short circuit, overload, AC interrupt, battle short.

Instrumentation: Start/stop/preheat switch, volt meter, frequency meter, battery charging ammeter, percent load. Indicator for power on and malfunction indicator energizes appropriate fault lamp.

EMI: Suppressed to MIL-STD-461 limits. EMP: HAEMP protected.

Voltage connection	120V, 1 phase, 2 wire	120/240V, 1 phase, 3 wire
Voltage adjustment range	114 - 126	228 - 252
Frequency adjustment range	±3%	±3%

Shelter has standard power outlets.

Electric Power Rating: 10 kW, 60 Hz @ .8 pf from -25 °F to 120 °F, 4000 ft/95 °F. Derate 3.5% per 1000 ft above 4000 ft up to 8000 ft.

Electric Power Quality	Voltage	Frequency
Regulation (max)	3%	3%
Modulation (max)	3%	
Short term steady st stability (30 sec)	2% bandwidth	2% bandwidth
Long term steady state stability (8 hr)	4% bandwidth	3% bandwidth
Application, rejection of rated load (transient); recovery:	20% dip, 30% rise 1 sec	3% under/over 3 sec
motor load (low power factor) recovery	40% dip 5 sec	
Max waveform deviation factor	6%	
Individual waveform harmonic	2%	

Environmental Capability: (when housed in shelter tunnel) -25 °F to 120 °F, rain, humidity, sand/dust, -60°F cold storage, salt spray, fungus.

Noise: 70 dBA @ 7 meters (23 ft).

Human Factors: MIL-STD-1474.

Optional Equipment: None

Technical Manuals: OPERATORS, UNIT, DS, and GS: ARMY: TM 9-6115-670-14&P

FIGURE B-2 MEP-903A

APPENDIX B
CHARACTERISTICS DATA SHEET
10 kW, 60 Hz, DED, Auxiliary Power Unit (APU)



10 kW APU and control panel
removed from shelter.
- rear view -



10 kW APU ready to slide
into shelter.
- front view -

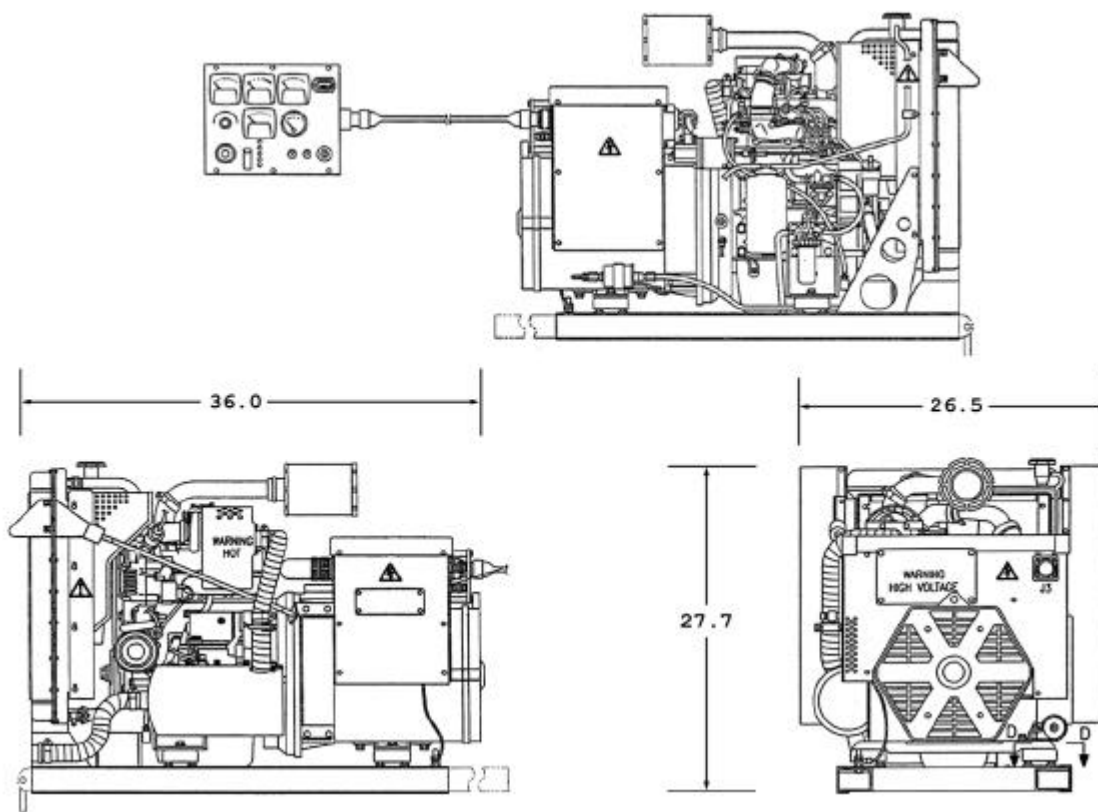


FIGURE B-2 MEP-903A - Continued

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APPENDIX C
STANDARD FAMILY OF AVIATION GROUND POWER UNITS

C.1 SCOPE

C.1.1 Scope. This Appendix identifies the current members of the DoD Standard Family of MEPGS for aviation ground power support. Data contained in this Appendix is for information only and is provided to assist both field operation and materiel developer personnel to select the power generation source that will best meet their needs. DoD activities are to utilize these power sources to the maximum extent practicable per DoD DIRECTIVE 4120.11.

C.1.2 Appendix Organization. This appendix is a compilation of characteristics data sheets (see TABLE C-I) arranged by power rating capacity.

TABLE C-I. Guide to CHARACTERISTICS DATA SHEETS of APPENDIX C

MODEL NO.	ITEM DESCRIPTION	NSN	FIG	PAGE
MEP-362A	10 kW, 28VDC, GTED, Aircraft Support Unit, Integral wheel mount	6115-01-161-3992	C-1	65
MEP-356A	60 kW, 400 Hz; 2 kW, 28VDC; Pneumatic, Self Propelled, GTED, Aviation Ground Power Unit	6115-00-420-8486	C-2	67
MEP-357A	72 kW, 400 Hz; 21 kW, 28VDC; Self Propelled, DED, Aviation Support Unit	6115-00-110-1859	C-3	69

C.2 APPLICABLE DOCUMENTS

This section is not applicable to this Appendix.

C.3 DEFINITIONS

C.3.1 Use definitions of basic document.

C.4 GENERAL DESCRIPTIONS

C.4.1 Item Descriptions.

C.4.1.1 10 kW 28 VDC Start Cart (MEP-362A). The 28 VDC start cart is a wheeled aviation ground support generator set used to start and service aircraft (primarily helicopters) utilizing 28 volt direct current. The start cart is gas turbine engine powered. Power is provided via a standard 28 VDC aircraft connection.

C.4.1.2 60 kW, 400 Hz, and pneumatic Aircraft Ground Support Unit. This self propelled unit provides electrical and pneumatic (bleed air) power to start and service aircraft by the USAF. The unit is gas turbine engine powered.

C.4.1.3 72 kW, 400 Hz, 21 kW 28 VDC Aircraft Ground Support Power Unit. This unit is an integral trailer mount, AC & DC power unit to start and service aircraft by the Navy. The unit is diesel engine driven. The unit has AC & DC power cable retracting reels and a parking brake.

C.4.2 Delivered condition.

a. Safety Items. The items of this Appendix are delivered with fire extinguishers. Aircraft ground support generators and the connected aircraft should have a single common ground.

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APPENDIX C

b. NATO slave receptacle. A NATO slave receptacle can be used to start the generator set from an external 24 VDC power source.

C.5 DETAILED DESCRIPTIONS

C.5.1 Detailed Descriptions. Detailed descriptions are contained in the CHARACTERISTICS DATA SHEETS of FIGURES C-1 through C-3.

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APPENDIX C
CHARACTERISTICS DATA SHEET
10 kW, 28 VDC, GTE, Aircraft Support Unit

Nomenclature	GEN SET, 10kW, GTE, 28VDC
Model Number	MEP-362A
NSN	6115-01-161-3992
LIN	G38140
SSN	
Weight	960 lb dry; 1175 lb wet

Mobility: All weather frame and housing, wheel mounted, parking brake. A 40 foot power cable is provided.

Dimensions: 89.0 x 71.0 x 49.0; Cube: 179 cu. ft.

Engine: Gas Turbine, 50,300 rpm (12,000 at gearbox), Tiernay Turbines - Model:101800-1, 28 VDC starter.

Fuels: JP-8, Jet-A. Fuel tank: 32 gallons, fuel consumption: 8 gal/hour.

Electrical: Drip proof generator enclosure, fungus & moisture treated, solid state voltage regulator, generator: Teledyne Brown, model 481-007.

Voltage Connection: 28VDC, 2 wire with ground

Protective Devices: Automatic shut down with emergency bypass for low fuel, low oil pressure, engine overtemp, overspeed, overload, overvoltage, generator overtemp and undervoltage.

Instrumentation: On/off switch, hourmeter, volt meter, output current meter, battery charging meter.

EMI: Suppressed to MIL-STD-461 limits. EMP: HEAMP protected.

Electric Power Rating: 10 kW @ 125 °F/MSL, 107 °F/5000 ft, 95 °F/8000 ft.

Electric Power Quality	DC voltage
Regulation	4%
Short term steady state stability (30 sec)	2% bandwidth
Long term steady state stability (4 hr)	2% bandwidth
Application of rated load (transient) recovery	30% dip 1 sec
Rejection of rated load (transient) recovery	40% rise 0.5 sec
DC ripple	5.5%

Environmental Capability: -65 °F to 125 °F, rain, humidity, altitude, sand/dust, transportation, cold storage -65 °F, salt spray, fungus.

Noise: Not specified.

Human Factors: MIL-STD-1474.

Optional Equipment: None

Technical Manuals:

Army	AF	Navy	USMC
TM 5-6115-612-12		AG-320B0-OMM-OOO	
TM 5-6115-612-34		AG-320B0-MME-OOO	
TM 5-6115-612-24P	TO 35C2-3-471-4	AG-320B0-IPE-OOO	TM 6115-24P/1

FIGURE C-1 MEP-362A

APPENDIX C
CHARACTERISTICS DATA SHEET
10 kW, 28VDC, GTE, Aircraft Support Unit

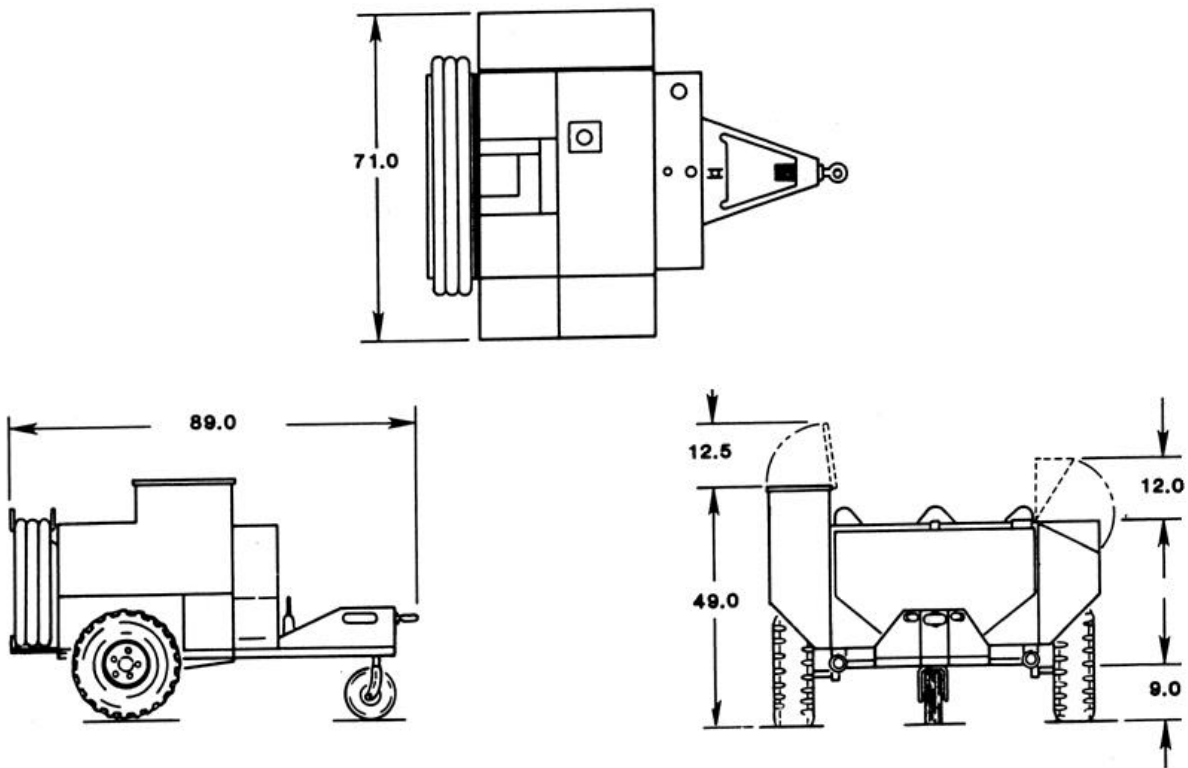


FIGURE C-1 MEP-362A - Continued

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APPENDIX C
CHARACTERISTICS DATA SHEET
60kW Aircraft Ground Support Unit
(Air Force Unit, Not Type Classified for Army use)

Nomenclature	Gen Set, 60kW, GTE, 400 Hz, pneumatic, self propelled
Model Number	MEP-356A
NSN	6115-00-420-8486
LIN	
SSN	
Dry Weight	2800 lb.
Wet Weight	3940 lb.

Mobility: Fully enclosed, electrically self propelled, wheel mounted, AC power cable, pneumatic hose, parking brake.
Dimensions: 116.75 x 54.5 x 67.3. Cube: 247 cu. ft.
Engine: Gas turbine, 177 horsepower @ 42,000 rpm, bleed air, 24 VDC starter.
Fuel: JP-8, Jet-A. Fuel tank: 190 gallons. Fuel consumption: 33 gal/hr (41 w/ bleed air).
Electrical: Drip proof generator enclosure, fungus & moisture treated, solid state voltage regulator, solderless connectors, Separate AC brushless rotary exciters: ? pole (AC), x pole (DC).
Voltage Connection: 3 phase: 115/200 V - 4 wire, 60 foot cable: 400 Hz convenience outlet, DC: 28 V - 2 wire (propulsion and utility only, not for aircraft), 28 VDC slave receptacle.
Pneumatic: Flow rate: 150 ± 4 pounds/minute. Pressure: 51 ± 2 psia @ 385 °F
Reliability: 478 Hr. MTBF specified.
Protective Devices: Short circuit, AC overvoltage/undervoltage, AC under-frequency, low oil pressure, high temperature, overspeed.
Instrumentation: Hour meter, AC/DC voltmeter, frequency meter, battery charging ammeter & voltmeter, fuel level, tachometer.
EMI: Suppressed to MIL-STD-461 limits. EMP: not protected.

Electric Power Quality		
Condition	voltage	frequency
Short term steady state stability	not rated	0.5 % bandwidth
Long term steady state stability	not rated	not rated
Application of rated load (transient)	25% dip	1% undershoot
recovery	0.25 sec	0.4 sec
Rejection of rated load (transient)	25% rise	0.25% overshoot
recovery	0.25 sec	1.5 sec
Max waveform deviation factor	not rated	
Individual waveform harmonic	2%	
motor load	not rated	

Electric Power Rating: 60 kW, 0.8 power factor @ 5000 ft/125 °F
Environmental Capability: -65 °F to 125 °F, rain, humidity, altitude, sand/dust, transportation, -65 °F cold storage, salt spray, fungus.
Human Factors: MIL-STD-1474. Noise: 93 dBA @ 25 feet.
Optional Equipment: None
Mobility: Wheel mounted, electric self-propelled.
Technical Manuals: Air Force

TO 35C2-3-372-11	TO 35C2-3-13	TO 35C2-3-14
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FIGURE C-2 MEP-356A

APPENDIX C
CHARACTERISTICS DATA SHEET
60kW Aircraft Ground Support Unit

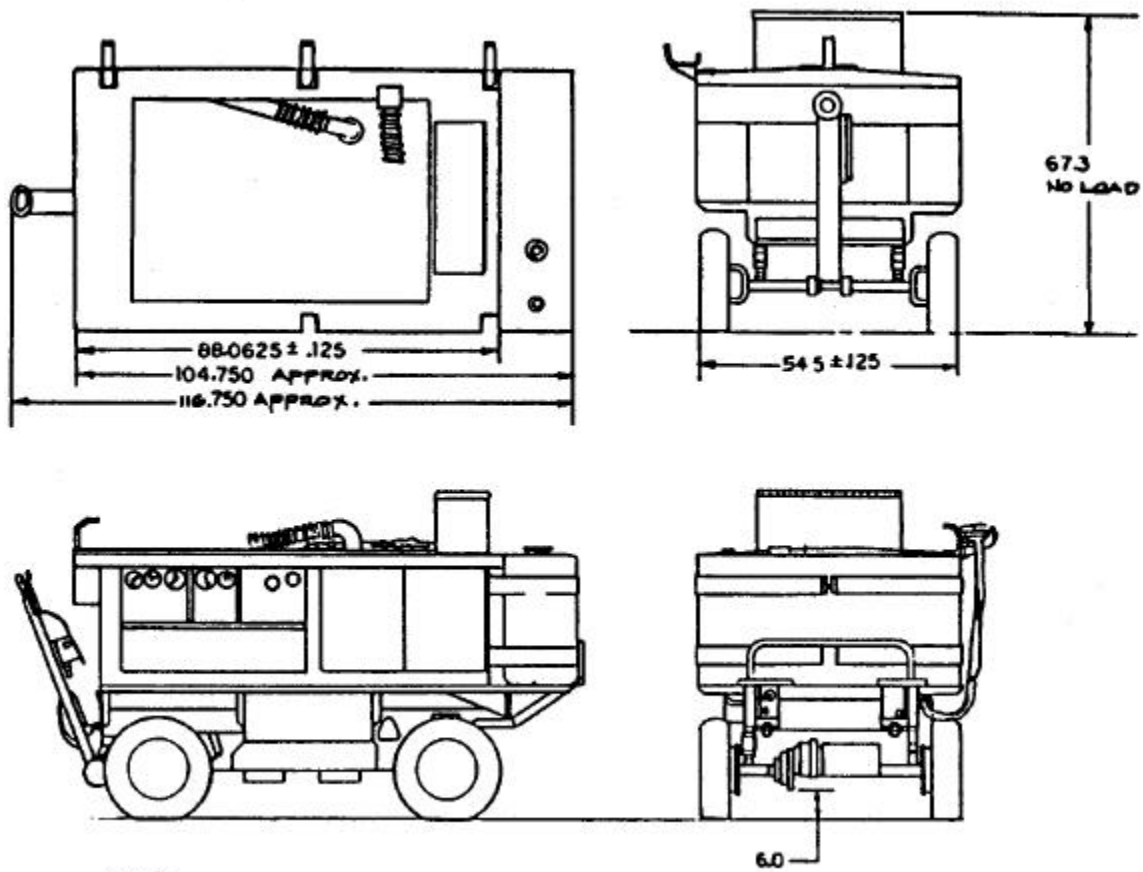


FIGURE C-2 MEP-356A - Continued

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APPENDIX C
CHARACTERISTICS DATA SHEET
Aircraft Ground Support Power Unit
(Navy Unit, Not Type Classified for Army use)

Nomenclature	Gen Set, 72 kW, DED, 400 Hz; 21 kW, 28 VDC
Model Number	MEP-357A
NSN	6115-00-110-1859
LIN	
SSN	
Dry Weight	7000 lb.
Wet Weight	7200 lb.

Mobility: Fully enclosed integral trailer mount, AC & DC power cable with retracting reels; parking brake; running lights.

Dimensions: 116.75 x 60.0 x 44.0. Cube: 178 cu. ft.

Engine: Diesel, 215 horsepower @ 1846 rpm, Detroit Diesel Co., 24 VDC starter.

Fuels: DL-1, DL-2, marine diesel. Emergency: JP-5, JP-8.

Fuel tank: 30 gallons. Fuel consumption: 6.7 gal/hours at rated load.

Electrical: Drip proof generator enclosure, fungus & moisture treated, solid state voltage regulator, solderless connectors, static exciter generator 24 VDC power supply with 750 and 1000 amp current limits.

Voltage Connection: 400 Hz, 3 phase: 115/200 V - 4 wire, DC: 28 V - 2 wire.

RAM: 250 Hr. MTBOMF (specified)

Protective Devices: Low fuel, high coolant temperature, DC overvoltage, AC overvoltage/undervoltage, overfrequency/underfrequency, engine overspeed low oil pressure. Fault indicators for above. Thermal and magnetic overload protection.

Instrumentation: On/off switch, hour, AC/DC volt, frequency, AC/DC ammeter, hourmeter, oil pressure, coolant temperature, fuel level, tachometer.

EMI: Suppressed to MIL-STD-461 limits. EMP: Not protected.

Electrical: Drip proof generator enclosure, fungus & moisture treated, solid state voltage regulator, solderless connectors, Marathon/Lima brushless generator.

Adjustment Range	Voltage	Frequency
115/200 V, 3 phase, 4 wire	105-125 V	380-440 Hz
28 VDC	23-35 V	

Power Rating: 72 kW, 400 Hz, @ 0.8 power factor and 21 kW 28VDC @ MSL/125 °F.

Electric Power Quality	AC Voltage	DC Voltage	Frequency
Regulation (max)	1%	±0.5 VDC	1%
Modulation (max)	1%		
Short term steady st stability (30 sec)	1%	2%	0.5%
Long term steady state stability (4 hr)	1%	2%	1%
Application/rejection of rated load: recovery:	25% dip/rise 0.4 sec	13% dip/rise 0.5 sec	nr 1 sec
motor load	nr		
Max waveform deviation factor	nr		
Individual waveform harmonic	2%		
DC ripple voltage		1.5 volts	

Environmental Capability: -25 °F to 125 °F, rain, humidity, altitude, sand/dust, transportation, cold storage: -45 °F, salt spray, fungus.

Noise: 87 dBA @ 25 feet.

Human Factors: MIL-STD-1474.

Optional Equipment: Winterization system

Technical Manuals: Navy: OPERATORS: NAVAIR 19-45-20

FIGURE C-3 MEP-357A

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APPENDIX C
CHARACTERISTICS DATA SHEET
72 kW Aircraft Ground Support Power Unit



MEP-357A

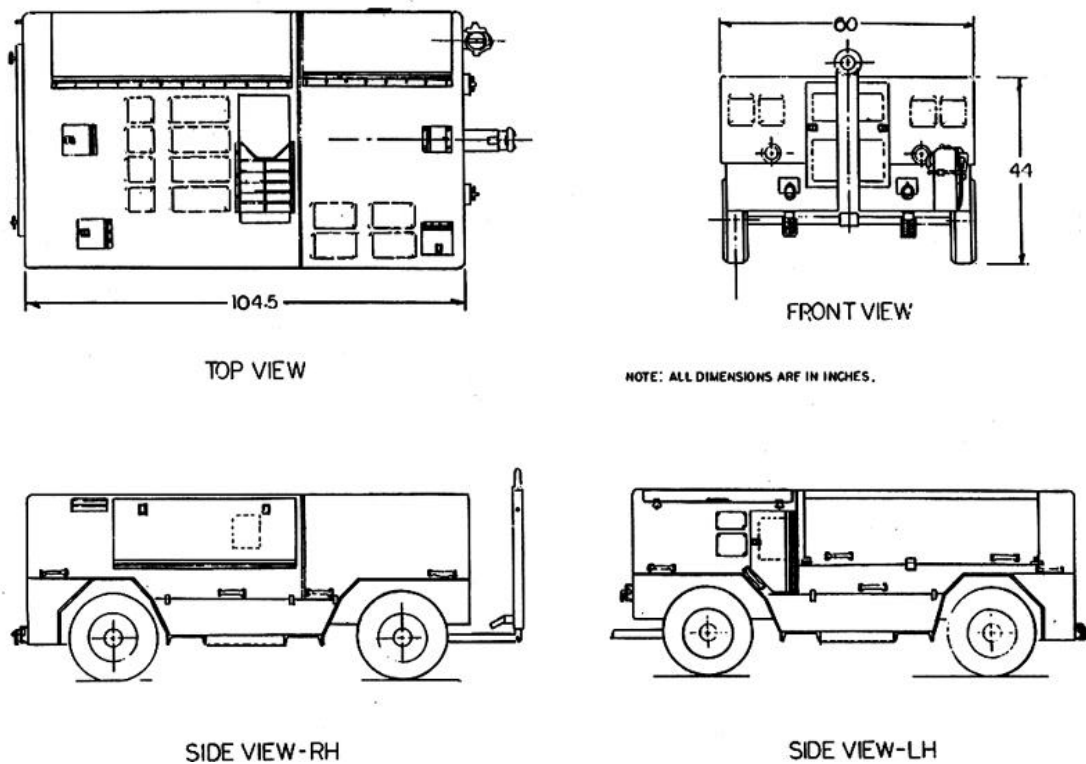


FIGURE C-3 MEP-357A - Continued

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APPENDIX D
POWER DISTRIBUTION AND ILLUMINATION SYSTEM, ELECTRICAL (PDISE)

D.1 SCOPE

D.1.1 Scope. This Appendix provides information on the Power Distribution and Illumination System, Electrical (PDISE) and the original Distribution and Illumination System, Electrical (DISE) which was developed for the Deployable Medical System (DEPMEDS).

D.1.2 Appendix Organization. This Appendix is a compilation of characteristics data sheets (see TABLE D-I) arranged by number of phases, current rating per phase and finally lights and receptacles.

TABLE D-I. Guide to CHARACTERISTICS DATA SHEETS of APPENDIX D

MODEL NO.	ITEM DESCRIPTION	NSN	FIG	PAGE
M200	200 amp/phase Feeder Sys - 3 Phase-DEPMEDS	6150-01-208-9755	D-1	75
M200 A/P	200 amp/phase Feeder Sys - 3 Phase	6150-01-308-5672	D-1	75
M100	100 amp/phase Feeder Sys - 3 Phase- DEPMEDS	6150-01-208-9754	D-2	76
M100 A/P	100 amp/phase Feeder Sys - 3 Phase	6150-01-308-5671	D-2	76
M40	40 amp/phase Dist Sys - 3 Phase-DEPMEDS	6150-01-208-9753	D-3	77
M40 A/P	40 amp/phase Dist Sys - 3 Phase	6150-01-307-9446	D-3	77
M60	60 amp Dist Sys - 1 Phase	6150-01-307-9445	D-4	78
M60 A/P	60 amp Dist Sys - 1 Phase-DEPMEDS	6150-01-208-9752	D-4	78
M46	Electrical Kit, Utility Receptacle	6150-01-208-9571	D-5	79

D.2 APPLICABLE DOCUMENTS

This section is not applicable to this Appendix.

D.3 DEFINITIONS

D.3.1 Acronyms used in this Appendix:

a. DISE - Distribution and Illumination System, Electrical: see D.4.1.1 below.

b. PDISE - Power Distribution and Illumination System, Electrical: see D.4.1.1 below.

c. DEPMEDS - Deployable Medical System - A mobile hospital system.

d. GF - Used in this Appendix to indicate circuit breaker is a ground fault protection type.

D.4 GENERAL DESCRIPTIONS

D.4.1 Item Descriptions.

D.4.1.1 Power Distribution and Illumination System, Electrical (PDISE). The PDISE (and the original DISE used with DEPMEDS) is a set of man portable, reliable, modular, quick to assemble standardized electrical distribution system components. The PDISE provides power networks which can reduce the number of generator sets needed at a field location. The PDISE is not an end item (i.e. does not have an NSN), but a family of 5 end items, consisting of two feeder systems, two distribution systems and a utility receptacle and lighting system (each with an independent NSN), and associated auxiliary equipment. These items consist of cabling and circuit protection components which can be optimized (see D.4.2) to meet unique user applications. The

APPENDIX D

feeder systems and the 3-phase distribution system will subdivide and distribute 60 Hz, 3 phase, 120/208 volt power from a single power source to multiple 60 Hz, 120 volt, 1 phase or 120/208 volt, 3 phase equipment users within shelters and various unit complexes. The 60 amp single phase distribution system will distribute power from a 60 Hz, 120 V single phase generator set to multiple single phase users. The feeder and distribution system components interface with DoD standard MEPGS from 5 kW to 200 kW, as well as other power sources and components. Military standard connectors, receptacles and cabling supplemented with some hospital grade commercial receptacles are used throughout the systems. Cables for different phase and power ratings have unique connectors to prevent improper connections. The only exceptions are the pigtail cable, which is the primary interface to a generator set, and the universal adapter (see Figure D-7). Extreme care should be taken to insure that the proper power characteristics are being provided by the pigtail connection or universal adapter.

D.4.1.2 Feeder System. The PDISE/DISE has two feeder systems, a 200 amp per phase system (M200) and a 100 amp per phase system (M100). Each system consists of a feeder center (circuit breaker box with military standard input and output connectors) with appropriate military standard connectors and military standard cabling that distributes the power from a 3-phase generator set to one or more 3 phase distribution systems.

D.4.1.3 Distribution System. The PDISE/DISE has two distribution systems. A three phase, 40 amp/phase distribution system (M40) consists of a housed circuit breaker system used to distribute 120/208 V, 3 phase power from a feeder system or smaller (5 kW -15 kW generator sets) to any 120/208 V, 3 phase loads and to 120V single phase loads. The single phase, 120 V, 60 amp (M60) distribution system was developed for applications which require up to 7.2 kW single phase power from a single phase generator set. It does not interface with either feeder system or the 40 amp distribution system. Both distribution systems interface with the utility receptacle and illumination kit.

D.4.1.4 Utility receptacle and illumination kit. The PDISE utility receptacle and illumination kit (M46) is a set of power cords, light sets and duplex boxes that can be connected to the feeder system to provide power and light to where it is needed. The PDISE utility receptacle and illumination kit has no self protection and should only be used with one of the PDISE distribution systems (i.e. M40 or M60). The PDISE utility receptacle and illumination kit provides internal tent and shelter wiring and lighting. The utility receptacles consist of hospital grade 120 volt "wall outlet" 20-ampere commercial receptacles.

D.4.1.5 Differences between systems. The primary difference between the PDISE and DISE systems is the circuit breakers. The PDISE uses hydraulic-magnetic circuit breakers and the DISE uses Thermal-magnetic circuit breakers. This difference also modifies the interior of the feeder and distribution centers but not the exteriors. In addition, the DISE utilizes ground fault protection circuit breakers on many of the 20 amp, single phase outputs.

D.4.2 Utilization Considerations.

D.4.2.1 Application Planning. This Appendix is not a substitute for proper training and detailed manuals, but does provide information on the size and types of PDISE hardware to assist planners. The number and types of power generating sources available and the details of the users power requirements, such as where and how much power is needed, will be the driving factors in determining which and how many PDISE components are required. The PDISE system is flexible and no single solution is a "best" solution. Some possible component quantities are given in TABLE D-II. A typical application is

APPENDIX D

presented in FIGURE D-6. The basis of issue for PDISE may not necessarily be one kilowatt of PDISE capability for each kilowatt of generator set capability. PDISE may be issued based on the user's load dispersion needs. It should be recognized that in some applications the PDISE total power capability can be much less than the generator set kW rating and in others, it can be much greater, but in all cases it should disburse the power to where the user needs it within a 100 foot radius of the generator set (300 feet when using the M100 and M200 to feed power to the M40).

D.4.2.2 Safety. Grounding of a PDISE is through the mobile electric power generating source. Care must be taken to insure that an adequate and proper neutral to ground connection is provided at this point. The system neutral should only be connected to ground at this single point or ground currents (faults) can be created. If connection is made to a grounded shelter, care must be taken to insure that the neutral is not connected to ground at the shelter. All warning and caution notices as described in the manuals and posted on the hardware are intended to prevent serious injury or death. As previously noted, the system has unique connectors which can not be interconnected. The only exceptions are the pigtail cable which is the primary interface to a generator set and the universal adapter (see D.4.1.1). Extreme care should be taken to insure that the pigtail connection to the generator or within the universal adapter is made properly.

D.4.2.3 Voltage Drop Considerations. The voltage drop, caused by resistance in the cabling, will limit the distance to which the power can be distributed. Generally, full rated power can be distributed about 100 feet from a distribution center and up to 200 feet from a Feeder system for a total of about 300 feet. TABLE D-III provides voltage drops for various cable size and length combinations. The voltage drops tabulated are for rated current. Since voltage drops are proportional to the current, 50% of rated would produce 50% of the drop listed in the table.

D.4.2.4 Auxiliary Equipment. Since application of PDISE can vary greatly, additional components may have to be added to the system. A table of Auxiliary equipment is provided at TABLE D-IV. These items may be used to tailor the PDISE to the user's requirements. The universal adapter, item 26 of TABLE D-IV, is of particular value and is shown in Figure D-7. It is designed to connect electrical equipment, with a connection not supported by PDISE, to PDISE. It consists of a box with a three-phase 40/60 ampere input connector (for connection to the proper distribution center) and five terminals (for connecting the user's equipment with a user supplied cable). The universal adapter also enables users not having the required connectors for the 40 and 60 ampere outlets on the 100M and 200M Feeder systems, or the feed-thru on the 40 ampere Distribution system, to hook up to PDISE. Also note that a pneumatic crimping tool has been supplied to all direct support maintenance units in the Army. The pneumatic crimping tool gives the units the capability to repair damaged cables and connectors. Its use saves time and cost of ordering new cables.

D.4.2.5 Phase Balance. Phase balance must be considered when connecting single phase loads to a 3-phase generator. If a phase is unbalanced by more than 10% it can cause damage to the power generation source. The phase connections of the PDISE feeder and distribution centers are given in TABLE D-V.

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D.5 DETAILED DESCRIPTIONS

D.5.1 Detailed Descriptions. Detailed descriptions are contained in the CHARACTERISTICS DATA SHEETS of FIGURES D-1 through D-5. Data common to all PDISE components are contained in TABLE D-VI.

APPENDIX D
CHARACTERISTICS DATA SHEET

200 Amp per Phase Feeder System - 3 Phase

Used to distribute 3 phase power from 60, 100 and 200 kW generator sets.

	PDISE	DISE
Model	M200 A/P Electrical Feeder System	M200 Electrical Feeder System
Description	120/208V, 3 phase, 200 amp/phase. Includes feeder center, pigtail, feeder cable and carrying straps	Same but for DEPMEDS
NSN	6150-01-308-5672	6150-01-208-9755
LIN	F55488	same
SSN	R45500	same
Weight	140 lb	same
Circuit breakers	hydraulic-magnetic	Thermal-magnetic w/ground fault on 20 amp output
Dimensions	33.5"x 23.0"x 20.4", 9.1 cubic ft	same



Photo is of Three Phase Family of PDISE components and includes 200 and 100 amp feeder centers and 40 amp distribution center.

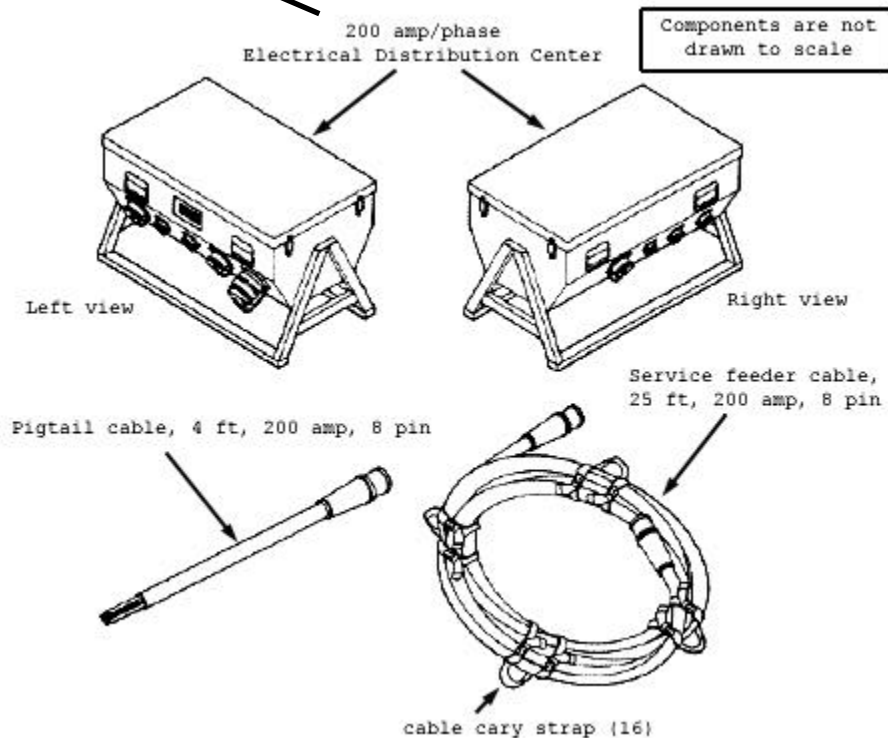


FIGURE D-1 200 Amp per Phase Feeder System - 3 Phase

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APPENDIX D
CHARACTERISTICS DATA SHEET

100 Amp per Phase Feeder System - 3 Phase

Used to distribute 3 phase power from 30, 60, 100 and 200 kW generator sets.

	PDISE	DISE
Model	M100 A/P Electrical Feeder System	M100 Electrical Feeder System
Description	120/208 V, 3 phase, 100 amp/ ph. Includes feeder center, pigtail, feeder cable and carrying straps.	Same but for DEPMEDS
NSN	6150-01-308-5671	6150-01-208-9754
LIN	F55487	same
SSN	R45400	same
Weight	77 lb	same
Circuit breakers	hydraulic-magnetic	Thermal-magnetic w/ground fault on 20 amp output
Dimensions	24.3"x 22.4"x 20.4", 6.4 Cubic ft	same



Photo is of Three Phase Family of PDISE components and includes 200 and 100 amp feeder centers and 40 amp distribution center.

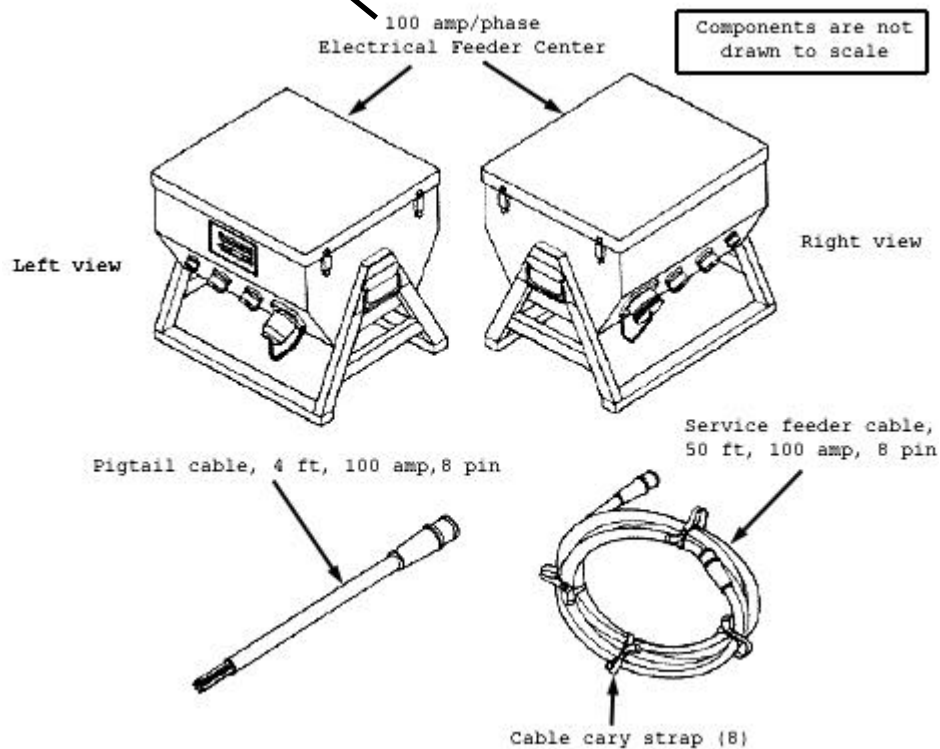


FIGURE D-2 100 Amp per Phase Feeder System - 3 Phase

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APPENDIX D
CHARACTERISTICS DATA SHEET

40 Amp per Phase Distribution System - 3 Phase

Used to distribute power from 10 through 200 kW AC generator sets.

	PDISE	DISE
Model	M40 A/P Electrical distribution System	M40 Electrical Distribution System
Description	120/208 V, 3 phase, 40 amp/phase. Includes distribution center, cables, carrying straps, receptacles and storage container	Same but for DEPMEDS
NSN	6150-01-307-9446	6150-01-208-9753
LIN	F55485	same
SSN	R45300	same
Weight	55 lb	same
Circuit breakers	hydraulic-magnetic	Thermal-magnetic & ground fault on some 20 amp output
Dimensions	24.3"x 21.8"x 16.1", 4.9 Cubic ft	same



Photo is of Three Phase Family of PDISE components and includes 200 and 100 amp feeder centers and 40 amp distribution center.

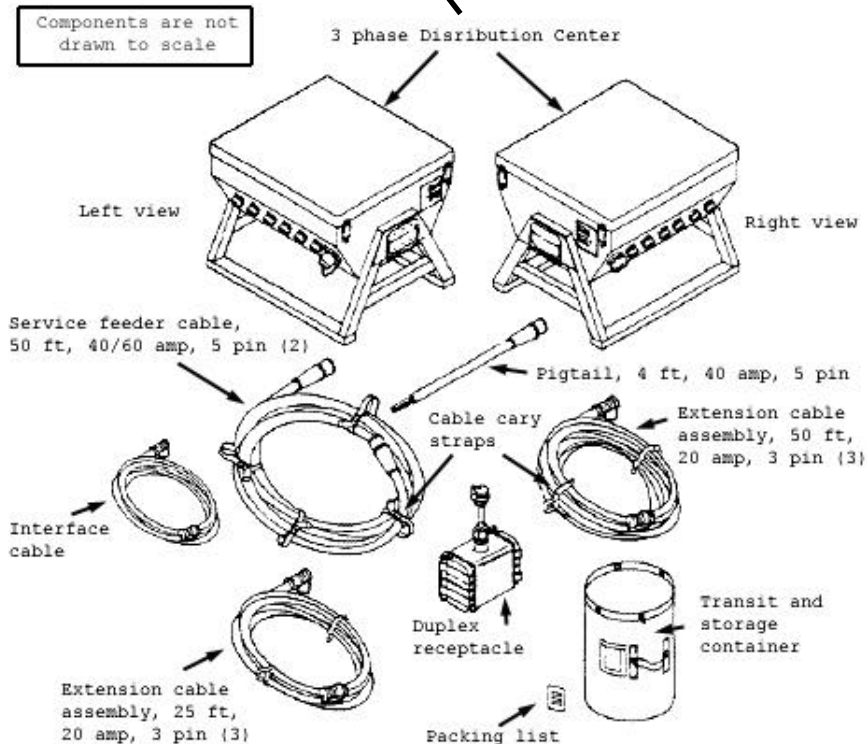


FIGURE D-3 40 Amp per Phase distribution System - 3 Phase

APPENDIX D
CHARACTERISTICS DATA SHEET

60 Amp Distribution System - Single Phase

Used to distribute single phase power from 5 through 15 kW AC generator sets and single phase output from feeder systems.

	PDISE	DISE
Model	M60 A/P Electrical Distribution System	M60 Electrical Distribution System
Description	120 V, 1 phase, 60 amp dist center and associated components	Same but for DEPMEDS
NSN	6150-01-307-9445	6150-01-208-9752
LIN	F55553	same
SSN	R45200	same
Weight	45 lb	same
Circuit breakers	hydraulic-magnetic	Thermal-magnetic w/ground fault on some 20 amp output
Dimensions	24.3"x 21.8"x 15.5", 4.7 Cubic ft	same

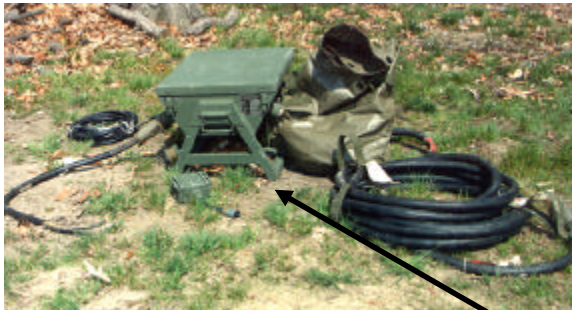


Photo is of 60 amp single Phase components of PDISE.

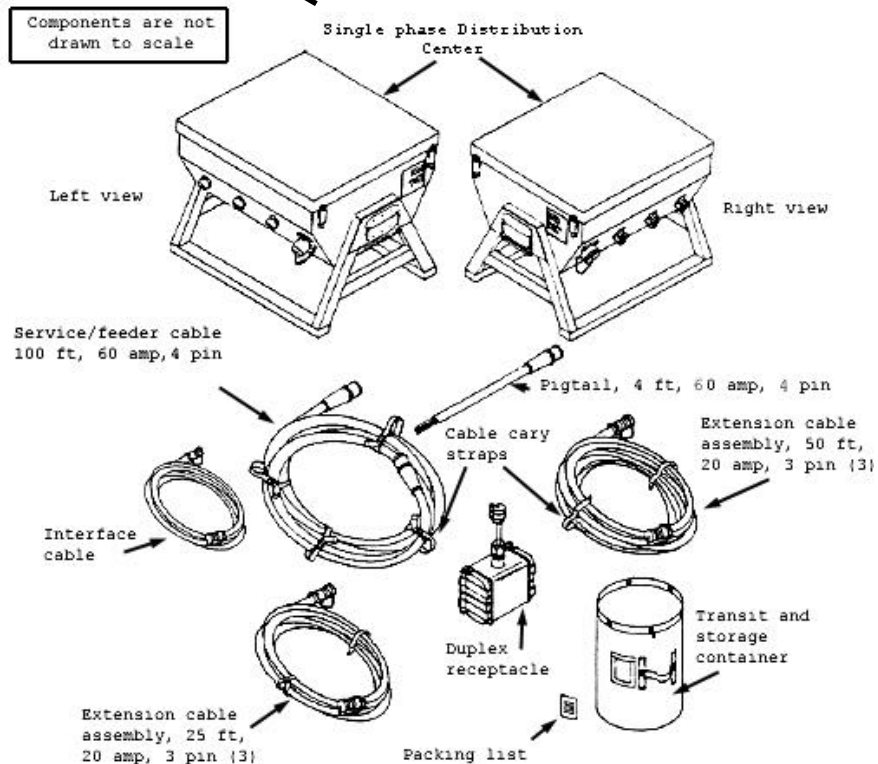


FIGURE D-4 60 Amp Distribution System - 1 Phase

APPENDIX D
CHARACTERISTICS DATA SHEET
Utility Receptacles and Lighting Set

Used to distribute single phase power to lighting and electrical receptacles from distribution systems.

	PDISE and DISE
Model	M46 Electrical Utility Kit
Description	Extension cords, utility receptacles and lighting sets
NSN	6150-01-208-9751
LIN	U89185
SSN	R62800
Weight	85 lb
Dimensions	16.0"x 16.0" x 26.0", 3.9 Cubic ft.

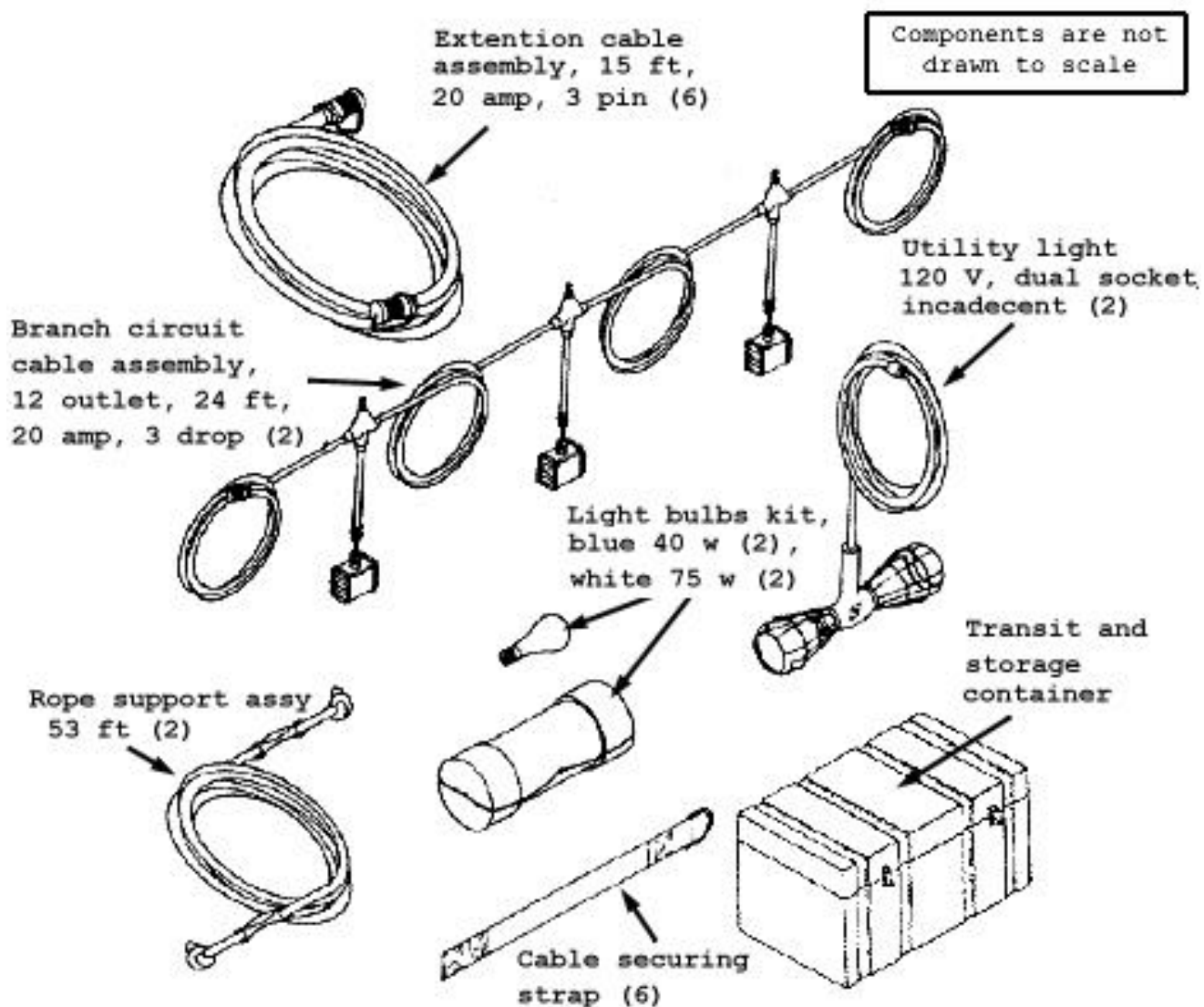


FIGURE D-5 Utility Receptacles and Lighting Set

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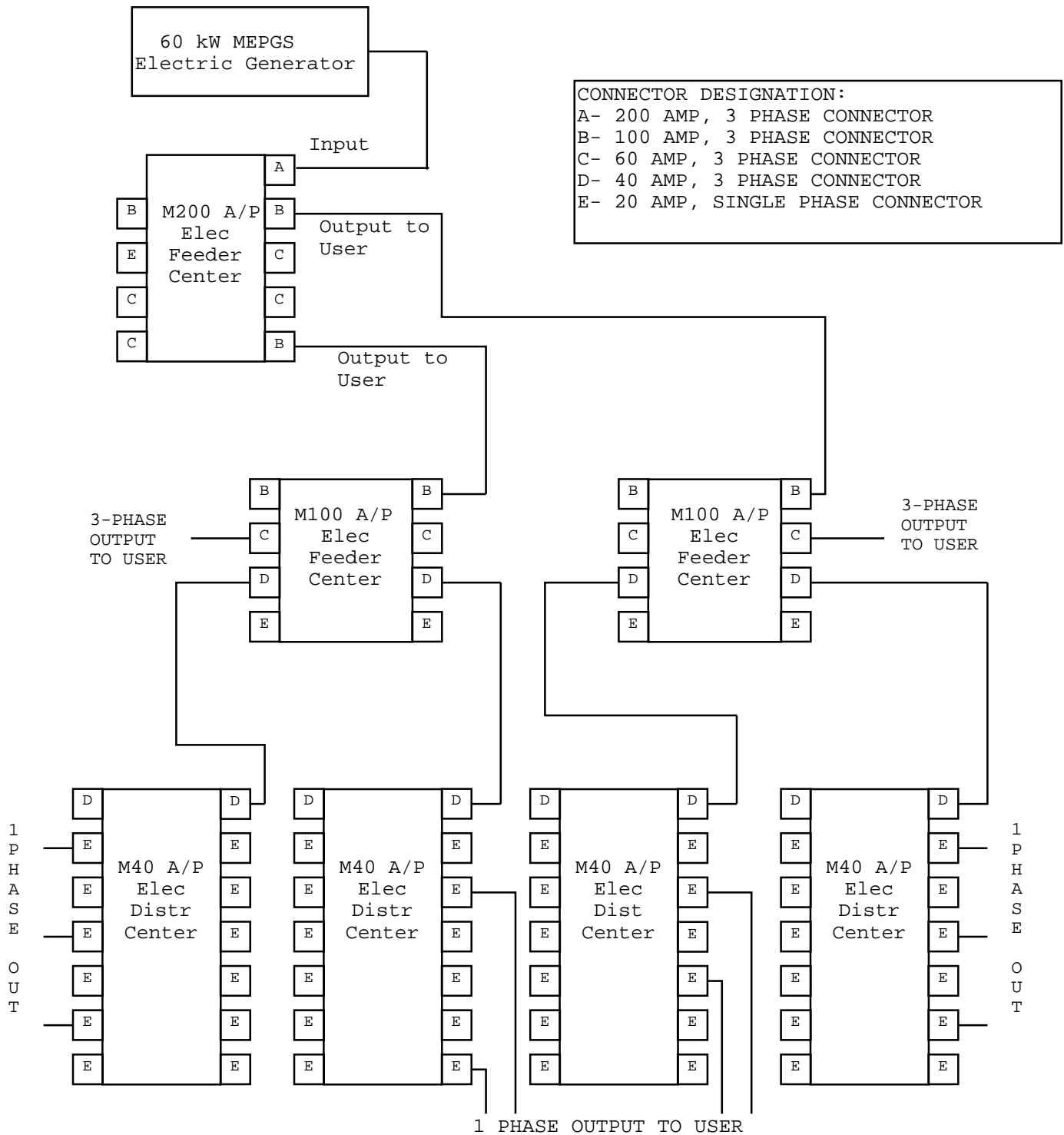


FIGURE D-6 Sample of a possible distribution arrangement

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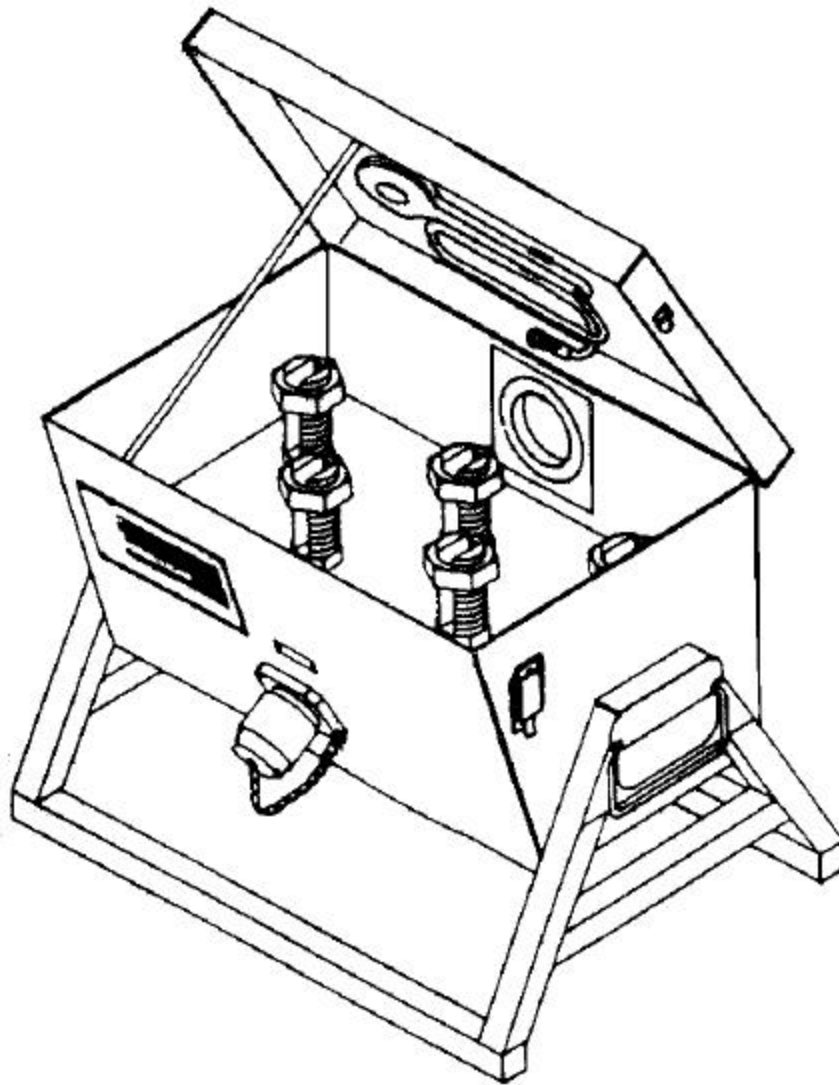


FIGURE D-7 Universal Adapter

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TABLE D-II. Some PDISE - generator applications

Generator kW	M200/ M200A/P	M100/ M100A/P	M40/ M40A/P	M60/ M60A/P	M46	# of phases
5				1	3	1
10				1	3	1
10			1		6	3
15				3	9	1
15			1		6	3
30			2		12	3
30		1	1		6	3
60		2	4		24	3
60	1	2	2		12	3
100		3	6		36	3
100	2	4	8		48	3
200	3	6	12		72	3

(Possible quantities of PDISE components shown)

TABLE D-III. Approximate voltage losses at rated amperage*

Rated amperage/no. of pins	Cable length in feet					
	15	25	50	100	200	300
200 amp/8 pin cables (3-ph)	1 V	1.6 V	3.2 V	6.4 V	12.8 V	19.2 V
100 amp/8 pin cables (3-ph)	0.4 V	0.7 V	1.4 V	2.8 V	5.6 V	8.4 V
60 amp/5 pin cables (3-ph)	0.5 V	0.9 V	1.6 V	3.5 V	6.4 V	10.5 V
40 amp/5 pin cables (3-ph)	0.3 V	0.6 V	1.1 V	2.3 V	4.4 V	6.9 V
60 amp/4 pin cables (1-ph)	0.5 V	0.9 V	1.7 V	3.4 V	6.8 V	10.2 V
20 amp/3 pin cables (1-ph)	1.1 V	1.8 V	3.6 V	7.2 V	14.4 V	21.6 V

* actual voltage drop will be affected by temperature and the quality of the connection made when mating the connectors (dirt, corrosion, and oil affect pin resistance).

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TABLE D-IV. Auxiliary equipment

	Extras of existing PDISE components Item Description	Weight lb	NSN
1	Branch circuit cable, 8 ft, 20 amp, 3 pin	2	6150-01-250-5644
2	Branch circuit cable, 16 ft, 20 amp, 3 pin	4	6150-01-256-6297
3	Branch circuit cable, 24 ft, 20 amp, 3 pin	6	6150-01-251-9124
4	Cable carrying strap	negl	
5	Cable securing strap	negl	
6	Container, transit and storage		6150-01-256-6298
7	Duplex receptacle, 120 V, 20 amp		6150-01-251-9125
8	Extension cable, 3.5 ft, 20 amp, 3 pin	0.7	6150-01-258-1253
9	Extension cable, 15 ft, 20 amp, 3 pin	3	6150-01-247-4766
10	Extension cable, 25 ft, 20 amp, 3 pin	5	6150-01-250-0044
11	Extension cable, 50 ft, 20 amp, 3 pin	10	6150-01-250-3643
12	Florescent light, 4 ft, 120 V, single tube		6150-01-250-0046
13	Container, light bulb kit, 2-bulb		6150-01-256-2068
14	Pigtail cable, 4 ft, 40/60 amp, 5 pin	5	6150-01-256-6301
15	Pigtail cable, 4 ft, 60 amp, 4 pin	4	6150-01-247-4778
16	Pigtail cable, 4 ft, 100 amp, 8 pin	17	6150-01-256-6300
17	Pigtail cable, 4 ft, 200 amp, 8 pin	28	6150-01-247-4768
18	Rope support assembly, 53 ft		6150-01-256-6302
19	Service/feeder cable, 25 ft, 40/60 amp, 5 pin	27	6150-01-247-4780
20	Service/feeder cable, 25 ft, 200 amp, 8 pin	136	6150-01-247-4782
21	Service/feeder cable, 50 ft, 40/60 amp, 5 pin	53	6150-01-247-4781
22	Service/feeder cable, 50 ft, 60 amp, 4 pin	48	6150-01-256-6303
23	Service/feeder cable, 50 ft, 100 amp, 8 pin	100	6150-01-256-6304
24	Service/feeder cable, 100 ft, 40/60 amp, 5 pin	105	6150-01-247-4779
25	Service/feeder cable, 100 ft, 60 amp, 4 pin	96	6150-01-247-4793
26	Universal adapter		5975-01-247-4791
27	Utility light, 120 V, dual socket, incandescent		6230-01-247-4784
28	Interface cable, 40/60 amp, 5-ton expando van		6150-01-250-3564
29	Interface cable, 20 amp, general illumination lighting set		6150-01-256-4290
30	Cable carrying strap (double), 200 amp		

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TABLE D-V. Connector to phase links

Center	Connector	Phase:	A L1	B L2	C L3	N
200 amp feeder center - M200 A/P & M200						
J-1	200 amp input (120/208 V, 3 phase)		x	x	x	x
J-4	100 amp output (120/208 V, 3 phase)		x	x	x	x
J-5	100 amp output (120/208 V, 3 phase)		x	x	x	x
J-6	20 amp output (120 V, 1 phase)(GF on M200)*			x		x
J-7	60 amp output (120/208 V, 3 phase)		x	x	x	x
J-8	60 amp output (120/208 V, 3 phase)		x	x	x	x
J-9	60 amp output (120/208 V, 3 phase)		x	x	x	x
J-10	60 amp output (120/208 V, 3 phase)		x	x	x	x
J-11	100 amp output (120/208 V, 3 phase)		x	x	x	x
100 amp feeder center - M100 A/P & M100						
J-1	100 amp input (120/208 V, 3 phase)		x	x	x	x
J-2	100 amp output (120/208 V, 3 phase)		x	x	x	x
J-3	60 amp output (120/208 V, 3 phase)		x	x	x	x
J-4	40 amp output (120/208 V, 3 phase)		x	x	x	x
J-5	40 amp output (120/208 V, 3 phase)		x	x	x	x
J-6	60 amp output (120/208 V, 3 phase)		x	x	x	x
J-7	20 amp output (120 V, 1 phase)(GF on M100)				x	x
J-8	20 amp output (120 V, 1 phase)(GF on M100)		x			x
40 amp distribution center - M40 A/P & M40						
J-1	40 amp input (120/208 V, 3 phase)		x	x	x	x
J-2	40 amp output (120/208 V, 3 phase)		x	x	x	x
J-3	20 amp output (120 V, 1 phase)(GF on M40)				x	x
J-4	20 amp output (120 V, 1 phase)				x	x
J-5	20 amp output (120 V, 1 phase)(GF on M40)			x		x
J-6	20 amp output (120 V, 1 phase)			x		x
J-7	20 amp output (120 V, 1 phase)(GF on M40)		x			x
J-8	20 amp output (120 V, 1 phase)		x			x
J-9	20 amp output (120 V, 1 phase)(GF on M40)				x	x
J-10	20 amp output (120 V, 1 phase)				x	x
J-11	20 amp output (120 V, 1 phase)(GF on M40)			x		x
J-12	20 amp output (120 V, 1 phase)			x		x
J-13	20 amp output (120 V, 1 phase)(GF on M40)		x			x
J-14	20 amp output (120 V, 1 phase)(GF on M40)		x			x
60 amp distribution center - M60 A/P & M60						
J-1	60 amp input (120 V, 1 phase)		x			x
J-2	60 amp output (120 V, 1 phase)		x			x
J-3	20 amp output (120 V, 1 phase)(GF on M60)		x			x
J-4	20 amp output (120 V, 1 phase)		x			x
J-5	20 amp output (120 V, 1 phase)(GF on M60)		x			x
J-6	20 amp output (120 V, 1 phase)		x			x
J-7	20 amp output (120 V, 1 phase)(GF on M60)		x			x
J-8	20 amp output (120 V, 1 phase)		x			x

* GF - ground fault protection.

TABLE D-VI. Common characteristics of PDISE/DISE

Environmental Capability: -25 °F to 120 °F, rain, humidity, sand/dust, cold storage -65 °F, salt spray, fungus. Note any special procedures in the manual.
Human Factors: MIL-STD-1474. Man portable and operable in 4 hours after arrival at site.
Auxiliary Equipment: Extra DISE/PDISE components may be requisitioned on an as required basis to meet particular needs. See Table D-III.
Technical Manuals:
OPERATOR, UNIT and DIRECT SUPPORT MAINT: ARMY: TM 9-6150-226-13
REPAIR PARTS AND SPECIAL TOOLS LIST: TM 9-6150-226-23P

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APPENDIX E
STANDARD MEPGS AND ASSOCIATED POWER UNITS AND POWER PLANTS
NO LONGER PROCURABLE BUT REMAIN IN INVENTORY

E.1 SCOPE

E.1.1 Scope. This Appendix identifies members of the DoD Standard Family of MEPGS that are no longer procurable but remain supportable. Also included are standard trailer mounted (Power Unit (PU)/Power Plant (PP)) configurations of these items. Data contained in this Appendix is for information only and is provided to assist both field operation and materiel developer personnel to select the power generation source that will best meet their needs. Procurable MEPGS from Appendix A are preferred to the sets identified in this Appendix but if the items of Appendix A are unavailable then these power sources may be used to meet power needs. DoD activities are to utilize these power sources to the maximum extent practicable per DoD DIRECTIVE 4120.11.

TABLE E-I. Guide to CHARACTERISTICS DATA SHEETS of APPENDIX E

MODEL NO.	ITEM DESCRIPTION	NSN	FIG	PAGE
MEP-019A	0.5 kW, 400 Hz, GED, TU unmod	6115-00-940-7862	E-1	92
MEP-015A	1.5 kW, 60 Hz, GED, TU unmod	6115-00-889-1446	E-2	94
MEP-025A	1.5 kW, 28 VDC, GED, TU unmod	6115-00-017-8236	E-2	94
MEP-016A	3 kW, 60 Hz, GED unmodified	6115-00-017-8237	E-3	96
MEP-016C	3 kW, 60 Hz, GED, mod	6115-01-143-3311	E-3	96
MEP-021A	3 kW, 400 Hz, GED, TU unmod	6115-00-017-8238	E-3	96
MEP-021C	3 kW, 400 Hz, GED, TU mod	6115-01-175-7321	E-3	96
MEP-026A	3 kW, 28 VDC, GED, TU unmod	6115-00-017-8239	E-3	96
MEP-026C	3 kW, 28 VDC, GED, TU mod	6115-01-175-7320	E-3	96
MEP-016B	3 kW, 60 Hz, DED, TU, wo/ASK	6115-01-150-4140	E-4	98
MEP-701A	3 kW, 60 Hz, DED w/ASK	6115-01-234-5966	E-4	98
AN/MJQ-32	Power Plant, DED, 3 kW, 60 Hz TRLMTD	6115-01-280-2300	E-5	100
AN/MJQ-33	Power Plant, DED, 3 kW, 60 Hz TRLMTD	6115-01-280-2301	E-6	101
MEP-017A	5 kW, 60 Hz, GED, TU	6115-00-017-8240	E-7	102
MEP-022A	5 kW, 400 Hz, GED, TU	6115-00-017-8241	E-7	102
MEP-002A	5 kW, 60 Hz, DED, TU	6115-00-465-1044	E-8	104
PU-751/M	Generator Set, DED, 5 kW, 60 Hz, TRLMTD	6115-00-033-1373	E-9	106
AN/MJQ-16	Power Plant, DED, 5 kW, 60 Hz TRLMTD	6115-00-033-1395	E-10	106
MEP-003A	10 kW, 60 Hz, DED, TU	6115-00-465-1030	E-11	108
MEP-112A	10 kW, 400 Hz, DED, TU	6115-00-465-1027	E-11	108
PU-753/M	Generator Set, DED, 10 kW, 60 Hz, TRLMTD	6115-00-033-1389	E-12	110
AN/MJQ-18	Power Plant, DED, 10 kW, 60 Hz TRLMTD	6115-00-033-1398	E-13	111
AN/MJQ-25	Power Plant, DED, 10 kW, 400 Hz TRLMTD	6115-01-153-7742	E-14	112
MEP-018A	10 kW, 60 Hz, GED, TU	6115-00-889-1447	E-15	113
MEP-023A	10 kW, 400 Hz, GED, TU	6115-00-926-0843	E-15	113
MEP-004A	15 kW, 50/60 Hz, DED, TU	6115-00-118-1241	E-16	115
MEP-113A	15 kW, 400 Hz, DED, TP	6115-00-118-1244	E-16	115
PU-405A/M	Gen Set, DED, 15 kW, 50/60 Hz, TRLMTD	6115-00-394-9577	E-17	117
PU-732/M	Generator Set, DED, 15 kW, 400 Hz, TRLMTD	6115-00-260-3082	E-18	118
AN/MJQ-15	Power Plant, DED, 15 kW, 400 Hz TRLMTD	6115-00-400-7591	E-19	119
MEP-005A	30 kW, 50/60 Hz, DED, TU	6115-00-118-1240	E-20	120
MEP-114A	30 kW, 400 Hz, DED, TP	6115-00-118-1248	E-20	120
PU-406B/M	Gen Set, DED, 30 kW, 50/60 Hz, TRLMTD	6115-00-394-9576	E-21	122
PU-760/M	Generator Set, DED, 30 kW, 400 Hz, TRLMTD	6115-00-394-9581	E-22	123
AN/MJQ-10A	Power Plant, DED, 30 kW, 50/60 Hz TRLMTD	6115-00-394-9582	E-23	124
MEP-006A	60 kW, 50/60 Hz, DED, TU	6115-00-118-1243	E-24	125
MEP-115A	60 kW, 400 Hz, DED, TP	6115-00-118-1253	E-24	125
PU-650B/G	Gen Set, DED, 60 kW, 50/60 Hz, TRLMTD	6115-00-258-1622	E-25	127

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APPENDIX E
TABLE E-I. Guide to CHARACTERISTICS DATA SHEETS of APPENDIX E- continued

MODEL NO.	ITEM DESCRIPTION	NSN	FIG	
PU-707A/M	Generator Set, DED, 60 kW, 400 Hz, TRLMTD	6115-00-394-9573	E-26	128
AN/MJQ-12A	Power Plant, DED, 60 kW, 50/60 Hz TRLMTD	6115-00-257-1602	E-27	129
MEP-007B	100 kW, 50/60 Hz, DED, TU	6115-01-036-6374	E-28	130
PU-495B/G	Gen Set, DED, 100 kW, 50/60 Hz, TRLMTD	6115-01-134-0165	E-29	132
MEP-108A	200 kW, 50/60 Hz, DED, TP	6115-00-935-8729	E-30	133
MEP-009A	200 kW, 50/60 Hz, DED, TU	6115-00-133-9104	E-30	133
MEP-009B	200 kW, 50/60 Hz, DED, TU	6115-01-021-4096	E-31	135
AN/MJQ-11A	Power Plant, DED, 200 kW, 50/60 Hz, TRLMTD	6115-00-394-9583	E-32	137
MEP-029A	500 kW, 50/60 Hz, DED, TU	6115-01-030-6085	E-33	138
MEP-012A	750 kW, 50/60 Hz, DED, PU	6115-01-143-3850	E-34	140
MEP-208A	750 kW, 50/60 Hz, DED, PU	6115-00-450-5881	E-35	142

E.1.2 Appendix Organization. This Appendix is a compilation of characteristics data sheets (see TABLE I) arranged by power rating capacity. Within a power rating, standard skid mounted power generating sources are listed first followed by standard trailer mounted variants.

E.2 APPLICABLE DOCUMENTS

This section is not applicable to this Appendix.

E.3 DEFINITIONS

The definitions in section 3 of this handbook apply to this Appendix.

E.4 GENERAL DESCRIPTION

E.4.1 General.

E.4.1.1 Gasoline engine-driven (GED) generator sets. Gasoline engine-driven generator sets were developed in the 0.5 to 10 kW power range. Since gasoline is no longer a logistics fuel that will be supported on the modern battlefield, these sets are being phased out as diesel fueled units become available to replace them.

E.4.1.2 Diesel engine-driven (DED) generator set. There are no planned additional procurements for diesel engine-driven generator sets listed in this Appendix. They are being replaced by the generator sets being procured and/or developed as listed in Appendix A.

E.4.1.3 Trailer mounted configurations. Several trailers are used in Power Unit and Power Plant MEPGS systems depending on size, weight and configuration. The PU/PPs of this Appendix will be phased out as sufficient quantities of units from Appendix A become available. A list of trailers follows.

a. M116A3. The M116A3 is a 3/4 ton trailer modified to carry the extra weight of a generator set and its associated hardware. The mobility is sufficient to allow lower speed access to areas accessible to a HMMWV.

b. M103A4. The M103A4 is a 1-1/2 ton trailer modified to carry the extra weight of a generator set and its associated hardware.

c. M200A1. The M200A1 is a 2-1/2 ton trailer modified to carry the extra weight of a generator set and its associated hardware.

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E.4.2 Delivered condition.

E.4.2.1 Skid sets.

a. Safety Items. Skid sets are delivered without fire extinguishers; however, a 5 pound carbon dioxide fire extinguisher is available. (See TABLE E-III).

b. Batteries. A chart of battery application is included in TABLE E-II.

TABLE E-II. BATTERIES

APPLICATION	FUEL	BATTERY	NUMBER	NSN
0.5-3.0 kW	GAS	NONE		
3.0 kW	DIESEL	4HN	1	6140-00-059-3528
5.0 kW	GAS and DIESEL	2HN	2	6140-00-057-2553
10 kW	GAS	2HN	2	6140-00-057-2553
10-100 kW	DIESEL	6TL	2	6140-01-210-1964
200 kW	DIESEL	6TL	4	6140-01-210-1964
500-750	DIESEL	8D	4	6140-01-190-9027

c. Auxiliary Fuel Line. A 25 foot auxiliary fuel line is furnished with the 5 kW through 200 kW diesel engine driven generator sets. Fuel lines for the other sets may be ordered (see TABLE E-III) or fabricated on site in accordance with drawing 69-668 (30554).

d. Ether starting aid. Sets greater than 15 kW are equipped with an integral ether starting aid for temperatures below 40 °F. Ether bottles may be obtained as NSN 2910-00-209-4997.

e. Paralleling cables. Sets greater than 15 kW are designed for parallel operation as well as single set operation. Sets are supplied with a paralleling cable for interconnection of the voltage regulators and governor systems of the sets to be paralleled. Additional details on parallel operation are contained in the generator set manuals and FM 20-31.

f. Power output terminals. Power output terminals consist of split-lug terminals with captive nuts. The Power Distribution and Illumination System, Electrical (PDISE) interfaces to the power output terminals via a pigtail connection. In addition, a series of standard power output receptacles (MIL-C-22992) are available through the supply system and the US Army Missile Command (MICOM) has a series of missile system receptacles for the 15 kW through 60 kW DED generator sets.

g. NATO slave receptacle. A NATO slave receptacle is provided with all generator sets in this Appendix. The slave receptacle can be used to start the generator set from an external 24 VDC power source.

E.4.2.2 Equipment delivered with trailer mounted sets. The trailer mounted sets (Power Units and Power Plants) are normally delivered with ground kit (ground rods, connectors, ground terminal), ground rod driver/puller, and 8 pound hammer, and one or two fire extinguisher per trailer. See TABLE E-III and data sheets for details.

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TABLE E-III. Auxiliary equipment

DESCRIPTION	NSN
GROUNDING ITEMS	
GROUND ROD KIT (rods, connectors, terminal)*	5975-00-296-5324
GROUND ROD (3 ft sec)(part of kit above)*	5975-00-878-3791
GROUND ROD, 9 FT	5975-00-296-5324
DRIVER/PULLER (slide hammer)*	5120-01-013-1676
HAMMER, 8 lb*	5120-00-251-4489
FUEL HANDLING ITEMS	
AUXILIARY FUEL LINE*	2010-00-016-1235
FUEL CONTAINER/DRUM ADAPTER*	5340-00-066-1235
5 GAL FUEL CAN	7240-00-222-3088
SPOUT	7240-00-177-6154
FIRE EXTINGUISHER	
5 LB CO2 FIRE EXTINGUISHER, A-A-1106	4210-00-270-4512

* in accessory box on PU/PPs.

E.4.3 Optional Equipment and Accessories. National Stock Number, DoD Model numbers and other pertinent information are tabulated on the individual CHARACTERISTICS sheets and are not included in the following paragraphs.

E.4.3.1 0.5-10 kW Gasoline Engine-Driven Generator Sets.

a. Canvas Cover. A canvas tarpaulin is available to protect the set when not in use.

b. Winterization Kit. The winterization kit permits the 3, 5, and 10 kW sets to start and operate at temperatures below -25 °F. The kit consists of a nylon cover with a flame retardent coating. A heating torch is used in conjunction with the cover to preheat the oil pan and cylinder heads. The cover remains on the set during operation.

c. Spark Arrester Kit. US Forestry Service approved spark arresters are available for the sets. These kits are required when sets are operated within National Forests or Parks.

E.4.3.2 5 and 10 kW Diesel Engine-Driven Generator Set.

a. Winterization Kit. The kit consists of a nylon cover with a flame retardant coating. The kit includes a frame that supports the cover while in use. Heat for preheating the engine and oil pan is obtained from a separate heater/battery box assembly. This assembly contains a fuel-fired hot air heater, fuel tank, batteries, and the necessary controls for proper operation of the kit. The cover remains on the set during operation.

E.4.3.3 15-200 kW Diesel Engine-Driven Generator Sets. Technical manual TO 35CA-1-111/TM5-6115-588-14/NAFAC P-8-601/TM 6115-15/4 contains additional information on the winterization system kits, automatic transfer and standby kits, and the remote control box kit. Technical manuals describing each set also contain information on the load bank kit and wheel mounting kit as well as the winterization system kits.

a. Winterization System. A winterization system utilizes integral set features and components plus either or both of the two optional winterization kits which mount within the set. Optional fuel burning or the electric

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winterization kits provide the capability of preheating the coolant and lubricating oil in ambient temperatures to -65 °F. Set operation is limited, however, if diesel fuel is stored at ambient, since diesel fuel-arctic, has a cloud point of -60 °F. External DC power must be used for starting the engine in ambient temperatures below -25 °F. This may be obtained from either the auxiliary winterization kits or other slave batteries such as vehicle batteries. The electric winterization kit is preferred for maintaining a set in standby condition when electric power is continuously available, but fuel burning kits will bring a cold set to operable temperature faster and can be used when no electric power is available.

b. Optional Electric Winterization Kit. This kit uses an external power source to maintain the engine coolant and lubricating oil at normal operating temperatures in situations which require immediate starting of the generator set. With the kit installed, the set is capable of starting, accelerating to a speed and accepting 75 Percent of rated load over the temperature range of -65 °F to +125 °F within 20 seconds of start initiation. This assumes temperature stabilization of the set prior to starting. The kit may be installed on a generator set which has been equipped with a fuel burning winterization kit. Power for operation of this kit may be obtained from any 205 to 240 volt, 50/60 Hz or 400 Hz, single phase source. These kits use approximately 3.0 kW for 15, 30 and 60 kW sets, 3.5kW for 100 kW sets and 4.0 kW for 200 kW sets.

c. Optional Fuel Burning Winterization Kit. The optional fuel burning winterization kit is used to preheat the engine coolant and lubricating oil burning fuel from the generator set fuel tank. If the generator set is equipped with an electric winterization kit, then extra components as listed in the electric winterization kit manual must be provided to accommodate both kits.

d. Auxiliary Electric Winterization Kit. The Auxiliary Electric Winterization Kit is utilized to provide a dependable external source of battery power for starting generator sets in ambient temperatures down to -65 °F whenever electric power is available. The kit consists of an insulated container, electric heaters, batteries, battery charger, control circuitry, and slave cable. The heaters maintain the battery electrolyte at a minimum of +32 °F after five hours of operation at -65 °F. The battery charger maintains both the kit batteries and generator set batteries in a fully charged condition. Power requirement for kit operation is 1.2 kW at 205-240 volts, 50-400 Hz, single phase power.

e. Auxiliary Fuel Burning Winterization Kit. The fuel burning auxiliary winterization kit is utilized to provide a dependable external source of battery power for starting generator sets in ambient temperatures down to -65 °F. The kit consists of an insulated container, batteries, hot-air fuel-burning heater, control box, battery charger, control circuitry, slave cable, and integral fuel system. The hot air heater will maintain the battery electrolyte at a minimum temperature of -25 °F after one hour of operation at -65 °F ambient temperature. The heater is designed to operate on the same fuels as the generator sets. The fuel tank has a sufficient capacity for a continuous operating period of 30 hours at -65 °F. The internal kit battery charger can be used to recharge both the set batteries and the kit batteries from utility power or the generator set once it is operating.

f. Automatic Transfer Panel Kit, 50/60 Hz. This kit is used to automatically connect a standby generator set to the load in the event of primary power failure. The transfer panel continuously monitors the primary source and when the voltage or frequency decreases to a preset value, it will

APPENDIX E

start the standby generator set, and transfer the load when the generator set frequency and voltage meet minimum requirements. The transfer will be break-before-make, thus there will be a momentary loss of voltage to the load. When primary power returns and meets minimum requirements for a predetermined time, the transfer panel will transfer the load back to the primary power source. After transfer of the load back to the primary power source, the standby generator set will run at no load for five minutes, shut down, and automatically cycle the generator set controls for standby operation. The transfer panel also permits starting of the standby generator set for a test run without disconnecting the load from the primary power source. If during the test run primary power should fail, the load will automatically be transferred to the standby generator set. The transfer panel is fully enclosed and may be wall or base mounted. It is designed for operation in ambient temperatures from +125 °F to -65 °F and provides power for the electric winterization kits which are required when using this kit to assure starting of the set within 20 seconds. Batteries of the standby generator set are maintained in a fully charged condition by the internal transfer panel battery charger.

g. Automatic Standby Panel Kit, 400 Hz. The automatic standby panel kit is utilized for transferring loads from an operating generator set to a generator set in standby status. When the operating generator set shuts down because of a fault, the standby set will automatically start, close the load contactor, and accept load. An adjustable timer permits setting of the standby generator set cranking time from 10 to 60 seconds. An internal battery charging circuit maintains the standby generator set batteries in a fully charged condition. This standby panel kit differs from the transfer panel kit in that it does not contain a power contactor and is operable only on 400 Hz generator sets.

h. Remote Control Box Kit. The remote control box kit permits starting and stopping of the generator set from a three wire remote station. When the generator set is started utilizing the remote control box, the set will come up to rated speed and the load contactor will close automatically. Use of the remote control box on a utility set requires the installation of the precise relay assembly to prevent the utility set from starting under load.

i. Load Bank Kit. A load bank kit consists of a balanced three phase, four wire, air cooled, resistive load and is used in conjunction with lightly loaded generator sets. The kit is used to load the set to approximately 50 percent of its rated load to prevent excessive engine carbonizing which occurs at loads less than 40 percent of rated set load. This parasitic load may be selected in increments of 12.5 percent of generator set rating at either 120/208 or 240/416 volts. The load bank also contains provisions for automatic load removal to prevent overloading of the set. Manual re-application after automatic load removal is required. The kit mounts on either the top or front of the set depending on set rating.

j. Wheel Mounting Kit. The wheel mounting kit provides mobility adequate for movement over level terrain such as airfields, but mobility over rough terrain requires mounting on tactical trailers or other suitable vehicles. The wheel mounting kit consists of two wheel axle assemblies, one containing a towbar and safety chain and the other containing a mechanical parking brake.

k. Spark Arrester Kit. US Forestry Service approved spark arresters are available for the 15 and 30 kW sets. These kits are required when sets are operated within National Forests or Parks. The 60, 100, and 200 kW sets are not required to have spark arresters since the engines are turbocharged.

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E.4.3.4 500 kW, Diesel Engine-Driven Generator Set.

a. Housing Kit. The housing kit consists of a rainproof enclosure that covers the top, sides, and ends of the set and is removable to permit access for overhaul or replacement of major components. The housing includes doors, covers, and louvers to permit preventive maintenance and operation under specified environmental conditions. Unhoused operation is limited to temperatures above freezing. Use of the engine preheat system in conjunction with the housing kit extends set operation to -25 °F.

b. Set Control Module. The set control module, contained in a free-standing, weatherproof metal enclosure, provides for automatic operation of the generator set. The set control module is capable of sensing and, after an adjustable time delay of 4 to 10 seconds, initiating an unattended starting and transfer sequence when the normal 120 V AC utility supply voltage varies more than ± 10 percent and/or the frequency varies more than ± 3 percent. The set control module can be located at a distance of up to 1000 feet from the generator set and contains provision to exercise the automatic sequencing circuitry. If two to six sets are required to support the load, both a paralleling control module and a set control module for each set is required for unattended starting and load transfer.

c. Paralleling Control Module. The paralleling control module operates in conjunction with the set control module during unattended starting and load transfer when the load requires more than one set to support the load. One paralleling control module is required for each set that is to be operated in parallel. This is in addition to the set control module that is also required for each set. A maximum of six sets may be connected together for automatic sequencing. The paralleling control module is housed in a free-standing, weatherproof metal enclosure.

d. Remote Control Station. The remote control station will allow remote start and stop, monitor, and control of a single set and paralleling with like sets, from a remote location up to 1000 feet away.

e. Remote Control Cable. The remote control cable connects the remote control station to the generator set and includes a telephone line for communication purposes.

E.4.1.5 750 kW Diesel Engine-Driven Generator Set, MEP-208A. Optional equipment for the 750 kW diesel engine-driven generator set is the same as for the 500 kW diesel engine-driven generator set, MEP-029A (see paragraph E4.1.4) except that the MEP-208A is procured as a housed set and does not require a housing kit.

E.5 DETAILED DESCRIPTIONS

E.5.1 Detailed Descriptions. Detailed descriptions are contained in the CHARACTERISTICS DATA SHEETS of FIGURES E-1 through E-35.

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APPENDIX E
CHARACTERISTICS DATA SHEET
0.5 kW, GED, 400 Hz Generator Set

Model Number	MEP-019A
NSN	6115-00-940-7862
LIN	J43027
Dry Weight	85 lb.
Wet Weight	

Configuration: Tubular frame skid.

Dimensions (LxWxH): 19.6 x 17.0 x 17.0 (in.) Cube: 3 cu. ft.

Engine: 1 cylinder gasoline, 1.5 hp @ 3428 RPM, rope start, air cooled.

Fuels: Automotive gasolines, (emergency - aviation gasolines); Fuel consumption: 0.25 gal/hour @ rated load. Fuel capacity: 1 gal.

Electrical: Drip proof generator enclosure, fungus & moisture treated, solid state voltage regulator, brushless rotary exciter.

Electric Power Rating: 0.5 kW @ 1.0 pf from -25 °F to 125°F/MSL, 107 °F/5000 ft, 95 °F/8000 ft.

Voltage Connection: 120 V, 400 Hz, 1 phase, 2 wire.

Instrumentation: Voltmeter.

Protective Devices: none

Reliability: 250 hr MTBF (specified).

EMI: Suppressed to MIL-STD-461 limits. EMP: not protected.

Electric Power Quality	voltage	frequency
Short term steady state stability (30 sec)	2% bandwidth	4% bandwidth
Long term steady state stability (4 hr)	2% bandwidth	4% bandwidth
Application/rejection of rated load recovery	30% 2 sec	3% under/5% over 4 sec/6 sec
Max waveform deviation factor	8%	
Individual waveform harmonic	5%	
Regulation	4%	3%
Adjustment range	114 V to 126 V	

Environmental Capability: rain, humidity, altitude, sand/dust, transportation, 3 foot drop, vibration, -65 °F cold storage, salt spray, fungus.
Operable at incline to 15%.

Human Factors: MIL-STD-1474. Man portable. Noise: 76 dBA @ 25 ft.

Optional Equipment	NSN	Weight (lb.)	Effect on Dim.(in.)
Canvas cover	6115-00-990-8770	4	negligible
Spark Arrester kit	2990-01-032-0755		none

Technical Manuals:

Army	Air Force	Marine Corps	Navy
TM5-6115-329-14	TO35C2-3-440-1	TM 81283-14	P-8-611E
TM5-2805-256-14	TO35C2-102-2	SL-4-81283B	
TM5-2805-256-24P	TO35C2-102-4		
LO 5-2805-256-12			

FIGURE E-1 0.5 kW, GED, 400 Hz Generator Set

APPENDIX E
CHARACTERISTICS DATA SHEET
0.5 kW, GED, 400 Hz Generator Set



MEP-019A

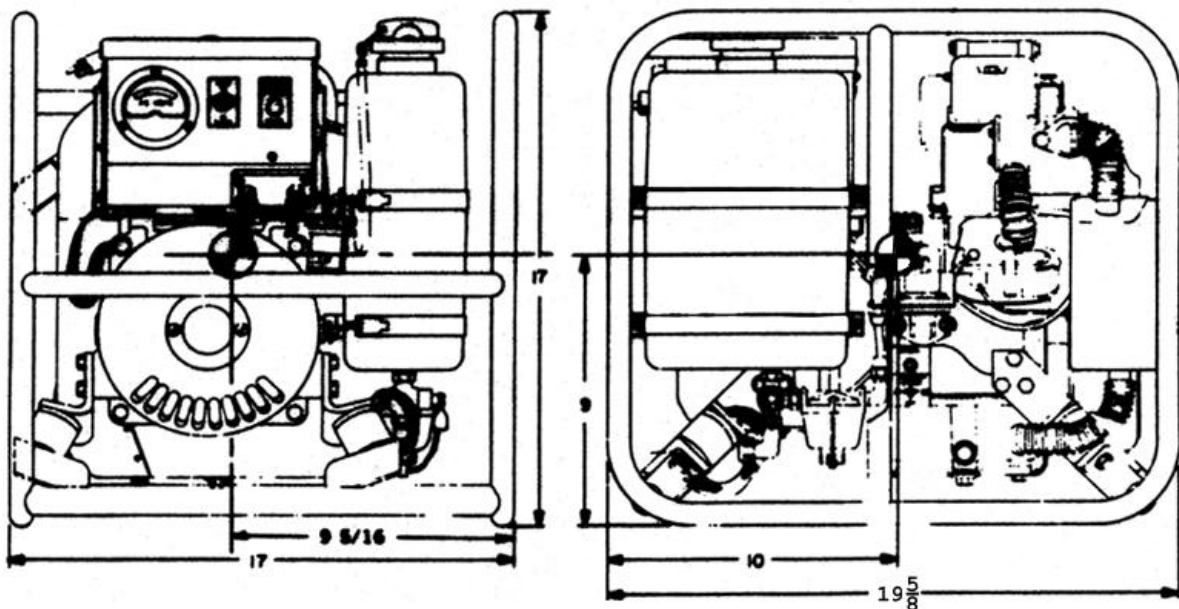


FIGURE E-1 0.5 kW, GED, 400 Hz Generator Set - Continued

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APPENDIX E
CHARACTERISTICS DATA SHEET
1.5 kW, GED, Generator Set

Nomenclature	1.5 kW, 60 Hz, GED, TU	1.5 kW, 28 VDC, GED, TU
Model Number	MEP-015A	MEP-025A
NSN	6115-00-889-1446	6115-00-017-8236
LIN	J43918	J44056
Dry Weight	125 lb.	125 lb.
Wet Weight		

Configuration: Tubular frame skid, lifting attachments provided.

Dimensions (LxWxH): 27.3 x 20.3 x 18.5 in.; Cube: 6 cu. ft.

Engine: 2 cylinder gasoline, 3 hp @ 3600 RPM, rope start, air cooled.

Fuels: Automotive gasolines, (emergency - aviation gasolines); Fuel consumption: 0.54 gal/hour @ rated load. Fuel capacity: 1.5 gal.

Electrical: Drip proof generator enclosure, fungus & moisture treated, solid state voltage regulator, brushless rotary exciter.

Instrumentation: AC: Voltmeter, frequency meter, DC: ammeter, voltmeter.

Protective Devices: DC: Overload, short circuit.

Reliability: 250 hr MTBF (specified).

EMI: Suppressed to MIL-STD-461 limits. EMP: not protected.

Connection	120V, 1 ph, 2 wire	240V, 1 ph, 2 wire	28 VDC, 2 wire
Voltage adj range	114 to 126 V	228 to 252 V	26.6 - 29.4 V

Electric Power Rating: 1.5 kW @ 1.0 pf from -25 °F to: 125°F/MSL, 107 °F/ 5000 ft, 95 °F/8000 ft.

Electric Power Quality	AC voltage	frequency	DC voltage
Regulation	4% - 120 V 5% - 240 V	3%	4%
Short term steady st stability (30 sec)	2% bandwidth	4% bandwidth	2% bandwidth
Long term steady state stability (4 hr)	2% bandwidth	4% bandwidth	2% bandwidth
Application/rejection of rated load recovery	30% dip 2 sec	3%/ 5% 4 sec/ 6 sec	30%/40% 2 sec
Max waveform deviation factor	8%		
Individual waveform harmonic	5%		
DC ripple			5.5%

Environmental Capability: rain, humidity, altitude, sand/dust, transportation, 3 foot drop, vibration, cold storage: -45 °F, salt spray, fungus. Operable at incline to 15%.

Noise: 78 dBA @ 25 ft. Human Factors: MIL-STD-1474. Man portable.

Optional Equipment			
Description	NSN	Weight (lb)	Effect on Dim.(in)
Canvas cover	6115-00-941-1655	5	negligible
Spark arrester kit	2990-01-032-0755		none

Technical Manuals			
Army	Air Force	Marine Corps	Navy
TM5-6115-323-14	TO35C2-3-385-1	SL4-07609A/07610A	P-8-612E
TM5-6115-323-15	TO35C2-3-385-11	TM 81283-14	
TM5-6115-323-24P	TO35C2-3-385-4	SL4-81283B	
TM5-2805-257-14	TO38G2-103-2		
TM5-2805-257-24P	TO38G2-103-4		

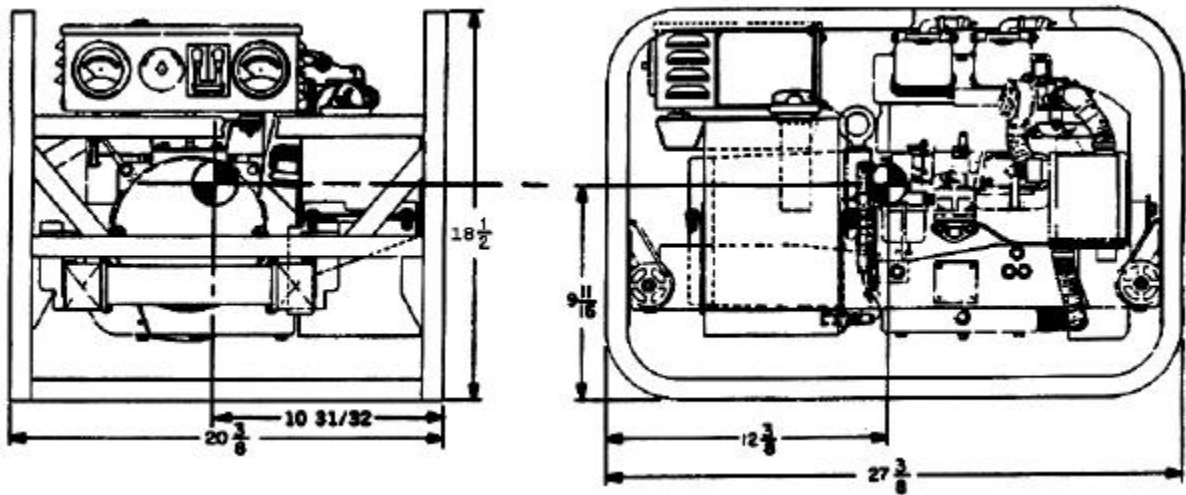
FIGURE E-2 1.5 kW, GED, Generator Set

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APPENDIX E
CHARACTERISTICS DATA SHEET
1.5 kW, GED, Generator Set



MEP-015A



MEP-025A

FIGURE E-2 1.5 kW, GED, Generator Set - Continued

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APPENDIX E
CHARACTERISTICS DATA SHEET

3 kW, GED, Generator Set (Diesel conversion kit is available to Reserves)

Nomenclature	3 kW, 60 Hz, GED, TU	3 kW, 60 Hz, GED, TU mod
Model Number	MEP-016A	MEP-016C
NSN	6115-00-017-8237	6115-01-143-3311
LIN	J45699	J45699
Nomenclature	3 kW, 400 Hz, GED, TU	3 kW, 400 Hz, GED, TU mod
Model Number	MEP-021A	MEP-021C
NSN	6115-00-017-8238	6115-01-175-7321
LIN	J45836	J45836
Nomenclature	3 kW, DC, GED, TU	3 kW, DC, GED, TU mod
Model Number	MEP-026A	MEP-026C
NSN	6115-00-017-8237	6115-01-143-3311
LIN	J46110	J46110
Weight	285 lb.	285 lb.

Configuration: Tubular frame skid, lifting attachments provided.

Dimensions (LxWxH): 35.0 x 23.8 x 25.0 in. Cube: 12 cu ft.

Engine: 4 cylinder gasoline, 6 hp @ 3600 RPM, rope start, air cooled.

Fuels: Automotive gasolines, (emergency - aviation gasolines); Fuel consumption: 0.84 gal/hour @ rated load. Fuel capacity: 3.6 gal.

Electrical: Drip proof generator enclosure, fungus & moisture treated, solid state voltage regulator, brushless rotary exciter.

Instrumentation: Voltmeter, frequency meter, ammeter, hourmeter.

Protective Devices: Short circuit.

Reliability: 250 hr MTBF specified.

EMI: Suppressed to MIL-STD-461 limits. EMP: HAEMP protected.

Connection	120/208V, 3ph, 4 wire	120/240V, 1ph, 3 wire	28 VDC, 2 wire
Volt adj range	197 - 218 V	228 -252 V	26.6 - 29.4
Freq adj range	±3%		

Electric Power Rating: 3 kW (AC @ 0.8 pf) from -25 °F (-65 °F w/ Wint kit)

to: 125°F/MSL, 107 °F/ 5000 ft, 95 °F/8000 ft.

Electric Power Quality	AC Voltage	Frequency	DC Voltage
Short term steady st stability (30 sec)	2% bandwidth	1% bandwidth	
Long term steady state stability (4 hr)	2% bandwidth	2% bandwidth	2% bandwidth
Application/Rejection of rated load recovery	30% 2 sec	3%/ 5% 4 sec/ 6 sec	30%/40% 2 sec
Max waveform deviation factor	6%-1ph; 5%-3ph		
Individual waveform harmonic	3%		
Ripple			5.5%
Regulation	4% (5% @ 240V)	3%	4%

Environmental Capability: rain, humidity, altitude, sand/dust, 3 foot drop, transportation, vibration, -65 °F cold storage, salt spray, fungus.

Operable at incline to 15%.

Human Factors: MIL-STD-1474. Man portable. Noise: 79 dBA @ 25 ft.

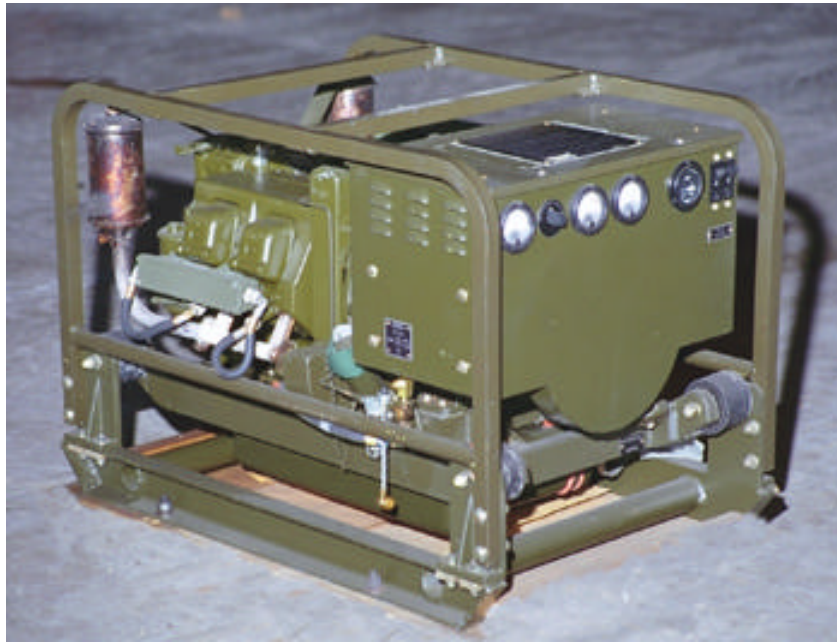
Optional Equipment	NSN	Weight (lb)	Effect on Dim.(in)
Spark arrester kit	2990-01-032-7384		none
Canvas cover (wint kit)	6115-00-941-1655	5	negligible
Torch (wint kit)	4520-00-710-4341		negligible
Diesel conversion kit*	2815-01-440-4426	negligible	none

* Available to US Army Reserves.

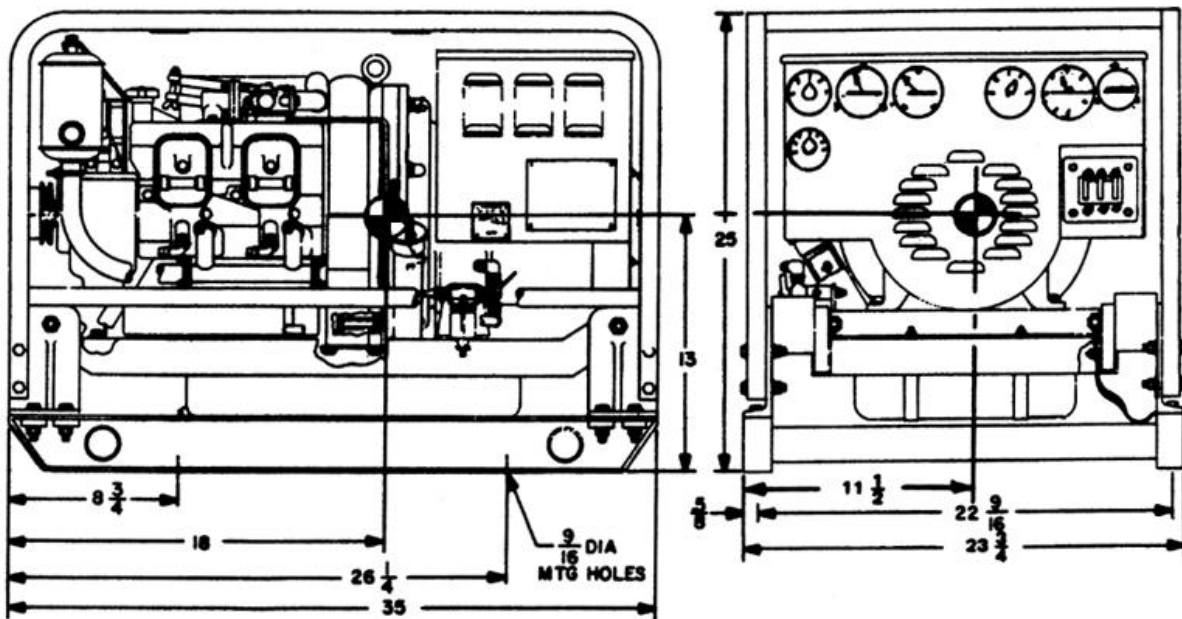
Technical Manuals			
Army	Air Force	Marine Corps	Navy
TM5-6115-271-14	TO35C2-3-386-1		
TM5-6115-271-15	TO35C2-3-386-4	SL-4-06926A	
TM5-2805-203-14	TO38G2-90-1		
TM5-2805-203-24P	TO38G2-90-14	SL-4-03522B	P-8-613E-24P
LO5-2805-203-12			

FIGURE E-3 3 kW, GED, Generator Set

APPENDIX E
CHARACTERISTICS DATA SHEET
3 kW, GED, 60 Hz Generator Set



MEP-026C (typical DC)



MEP-016A (typical AC)

FIGURE E-3 3 kW, GED, Generator Set - Continued

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APPENDIX E
CHARACTERISTICS DATA SHEET
3 kW, DED, 60 Hz Generator Set

Nomenclature	Gen Set, DED, 3kW, 60 Hz	w/Acoustic Suppression Kit (ASK)
Model Number	MEP-016B	MEP-701A
NSN	6115-01-150-4140	6115-01-234-5966
LIN	G54041	G54041
SSN		
Weight	468 lb dry, 526 lb wet	532 lb dry, 590 lb wet
(LxWxH in), Cube	35.0 x 23.8 x 25.0, 12 ft ³	44.0 x 28.5 x 30.0, 20 ft ³
Trailer mounted configurations		PP-AN/MJQ-32, FIG E-5 PP-AN/MJQ-33, FIG E-6

Configuration: Tubular frame skid or housed in ASK. Lifting & tie down.

Engine: Diesel, 8 horsepower @ 3600 RPM, 24 Volt starter, air cooled, mechanical governor, auxiliary fuel pump.

Fuels: Diesel: DL-1, DL-2 and Jet fuel: JP-8, Jet A-1. Fuel consumption: .37 gal/hour @ rated load. Fuel capacity: 4.5 gal.

Electrical: Drip proof generator enclosure, fungus & moisture treated, solid state voltage regulator, brushless rotary alternator.

Reliability: 350 hr MTBF (specified).

Protective Devices: Automatic shut down with emergency bypass for low fuel, low oil, overspeed, and overload.

Instrumentation: Hourmeter, voltmeter, frequency meter, load meter.

EMI: Suppressed to MIL-STD-461 limits. EMP: not protected.

Connection	120/208V, 3 ph, 4 wire	120/240V, 1 ph, 3 wire	120V, 1 ph, 2 wire, convenience recept
Volt adj range	197 - 218 V	228 -252 V	114 - 126 V
Freq adj range	±3%		

Electric Power Rating: 3 kW @ 0.8 pf from -25 °F to 125 °F/MSL, 107 °F/ 5000 ft, 95 °F/8000 ft.

Electric Power Quality	Voltage	Frequency
Short term steady st stability (30 sec)	2% bandwidth	1% bandwidth
Long term steady state stability (4 hr)	2% bandwidth	2% bandwidth
Application/rejection of rated load recovery	30% dip 2 sec	3% / 5% 4 sec/ 6 sec
Max waveform deviation factor	6% (1 ph); 5% (3 ph)	
Individual waveform harmonic	3% (1 & 3 ph)	
Regulation	4% (5% @ 240V)	3%

Environmental Capability: -25 °F to 125 °F, rain, humidity, altitude, sand/dust, transportation, -65 °F cold storage, salt spray, fungus.

Noise: 75 dBA @ 7 meters (23 ft)w/ Acoustic Suppression Kit (ASK).

Human Factors: MIL-STD-1474. Operable in arctic and NBC clothing.

Optional Equipment			
Description	NSN	Weight (lb.)	Effect on Dim.(in.)
Acoustic suppression kit	6115-01-271-1584	64	L+8, W+4, H+3
Diesel upgrade kit*	1730-01-418-0970	negligible	none

* Available to USMC.

Technical Manuals			
Army	Air Force	Marine Corps	Navy
TM5-6115-615-12	TO35C2-3-386-31	TM 05926B/06509B-12	NAVFAC P-8-646-12
TM5-6115-615-34	TO35C2-3-386-32	TM 05926B/06509B-34/3	NAVFAC P-8-646-34
TM5-6115-615-24P	TO35C2-3-386-34	SL-4-05926B/06509B-24P/2	NAVFAC P-8-646-24P

FIGURE E-4 3 kW, DED, 60 Hz Generator Set

APPENDIX E
CHARACTERISTICS DATA SHEET
3 kW, DED, 60 Hz Generator Set



MEP-701A

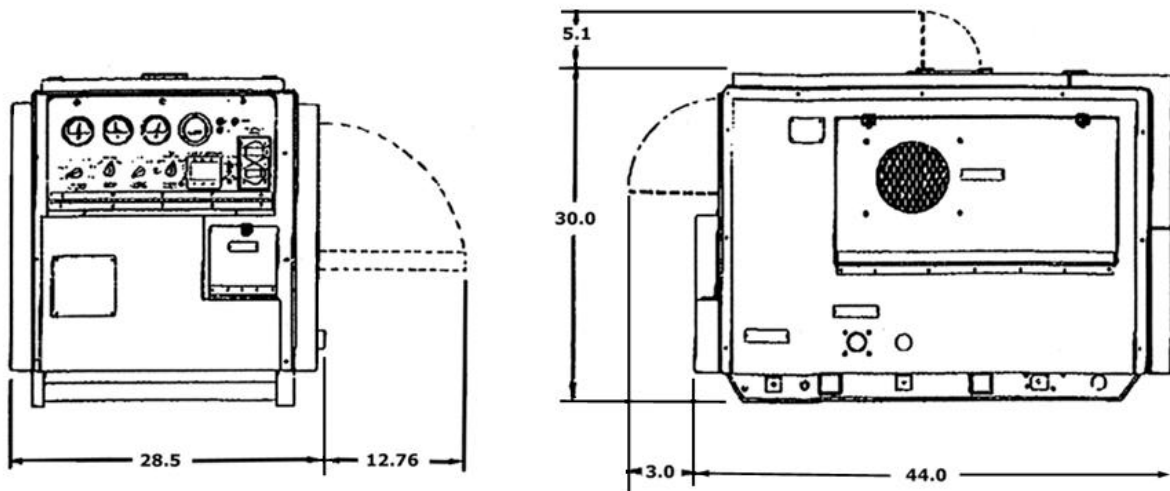


FIGURE E-4 3 kW, DED, 60 Hz Generator Set - Continued

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MIL-HDBK-633F

APPENDIX E
CHARACTERISTICS DATA SHEET
PP-AN/MJQ-32, POWER PLANT, DED, 3kW, 60 Hz, TRLMTD
To be replaced by PP-AN/MJQ-42

NSN	6115-01-280-2300	Dimensions (in.)	147.5 x 73.3 x 68.1
LIN	Z75718	Op. Weight	3160 lb.
SSN	M548	Ship weight	2720 lb
ASSMB	TA-13228E9895	Ship Cube	450 cu ft
SPEC	Not procurable	Camouflage	97403-13226E7478

COMPONENT	QTY	FIND	IDENTIFIER
3/4 Ton modified Trailer, M116A2	1	1	97403-13228E9896
Generator set, DED, 3 kW, 60 Hz, MEP-701A	2	2	6115-01-234-5966
Fuel can, 5 gallon	2	3	
Stowage rack assembly	1	4	97403-13228E9902
Fire extinguisher, 5 lb., A-A-1106	1	5	4210-00-270-4512
Switch box, 97403-13205E5079-3 (old)	1	6	97403-13229E5765
Support masts	1 ea.	7	97403-13228E9872
Cable reel, RC-435/4	1	8	MIL-R-55566

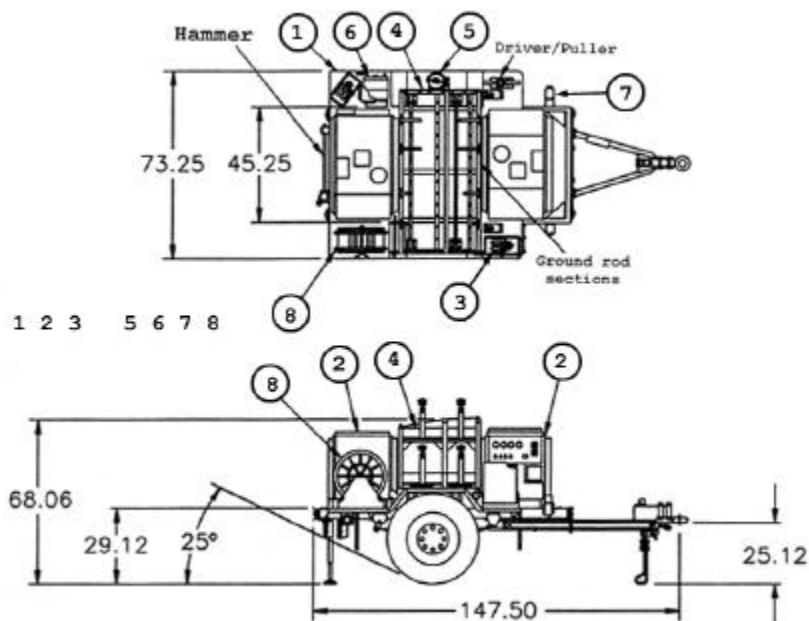


FIGURE E-5 PP-AN/MJQ-32

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APPENDIX E
CHARACTERISTICS DATA SHEET
PP-AN/MJQ-33, POWER PLANT, DED, 3kW, 60 Hz, TRLMTD
To be replaced by PP-AN/MJQ-43

NSN	6115-01-280-2301	Dimensions (in.)	145.3 x 73.5 x 73.9
LIN	Z13577	Op. Weight	2840 lb.
SSN	M506	Ship weight	2850 lb
ASSMB	TA-13229E2300	Ship Cube	390 cu ft
SPEC	Not procurable	Camouflage	97403-13226E7478

COMPONENT	QTY	FIND	IDENTIFIER
3/4 Ton modified Trailer, M116A2	1	1	97403-13228E9896
Generator set, DED, 3 kW, 60 Hz, MEP-701A	2	2	6115-01-234-5966
Fuel can, 5 gallon	2	3	
Accessory box	1	4	97403-13226E7737
Fire extinguisher, 5 lb., A-A-1106	1	5	4210-00-270-4512
Switch box, 97403-13205E5079-4 (old)	1	6	97403-13229E5765
Support masts	1 ea.	7	97403-13228E9872
Acoustic suppression kit	2	8	incl w/MEP-701A

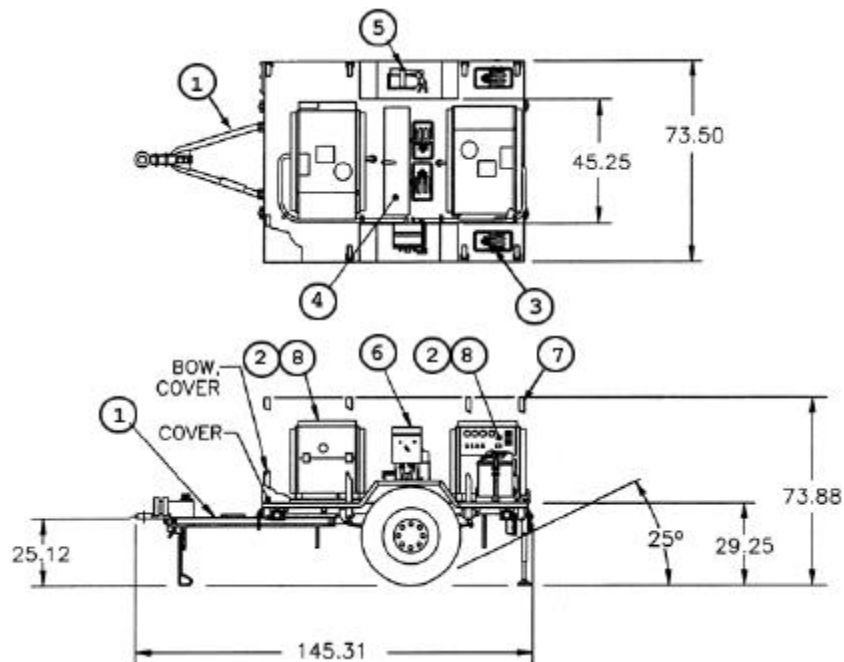


FIGURE E-6 PP-AN/MJQ-33

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MIL-HDBK-633F

APPENDIX E
CHARACTERISTICS DATA SHEET
5 kW, GED, Generator Set

Nomenclature	5 kW, 60 Hz, GED, TU	5 kW, 400 Hz, GED, TU
Model Number	MEP-017A	MEP-022A
NSN	6115-00-017-8240	6115-00-017-8241
LIN	J47068	J48713
Weight	488 lb.	479 lb.

Configuration: Tubular frame skid, lifting attachments provided.

Dimensions (LxWxH): 39.8 x 30.0 x 25.0 (in.) Cube: 17 cu. ft.

Engine: 2 cylinder gasoline, 10 hp @ 3600(60 Hz)&3428(400 Hz) RPM, rope and 24 VDC start, air cooled.

Fuels: Automotive gasolines, (emergency - aviation gasolines); Fuel consumption: 1.4 gal/hour @ rated load. Fuel capacity: 5.0 gal.

Electrical: Drip proof generator enclosure, fungus & moisture treated, solid state voltage regulator, brushless rotary exciter.

Instrumentation: Voltmeter, frequency meter, ammeter, hourmeter, oil pressure gage, battery charging ammeter.

Protective Devices: Short circuit, low oil pressure.

Reliability: 250 hr MTBF (specified).

EMI: Suppressed to MIL-STD-461 limits. EMP: HAEMP protected.

Connection	120/208V, 3ph, 4 wire	120/240V, 1ph, 3 wire	120V, 1ph, 2 wire
Volt adj range	197 - 218 V	228 -252 V	114 - 126 V
Freq adj range	±3%		

Electric Power Rating: 5 kW @ 0.8 pf from -25 °F (-65 °F/w Wint kit) to 125°F/MSL, 107 °F/ 5000 ft, 95 °F/8000 ft.

Electric Power Quality	AC Voltage	Frequency
Short term steady st stability (30 sec)	2% bandwidth	1% bandwidth
Long term steady state stability (4 hr)	2% bandwidth	2% bandwidth
Application/rejection of rated load recovery	30% dip/rise 2 sec	3% under/ 5% over 4 sec/ 6 sec
Max waveform deviation factor	6%-1ph; 5%-3ph	
Individual waveform harmonic	3%	
Regulation	4% (5% @ 240V)	3%

Environmental Capability: Rain, humidity, altitude, sand/dust, transportation, 3 foot drop, vibration, cold storage, salt spray, fungus. Operable at incline to 15°.

Human Factors: MIL-STD-1474. Man portable. Noise: 82 dBA @ 25 ft.

Optional Equipment			
Description	NSN	Weight (lb)	Effect on Dim.(in)
Spark arrester kit	2990-01-032-0757		none
Canvas cover (wint kit)	6115-00-945-7545	5	negligible
Torch (wint kit)	4520-00-710-4341		negligible

Technical Manuals			
Army	Air Force	Marine Corps	Navy
TM5-6115-332-14	TO35C2-3-424-1		P-8-614-14
TM5-6115-332-24P	TO35C2-3-424-24		
TM5-2805-258-14	TO38G2-89-21	TM-03523B-14	
TM5-2805-258-24P	TO38G2-89-34	SL-4-035-32B	

FIGURE E-7 5 kW, GED, Generator Set

APPENDIX E
CHARACTERISTICS DATA SHEET
5 kW, GED, 60 Hz Generator Set



MEP-022A

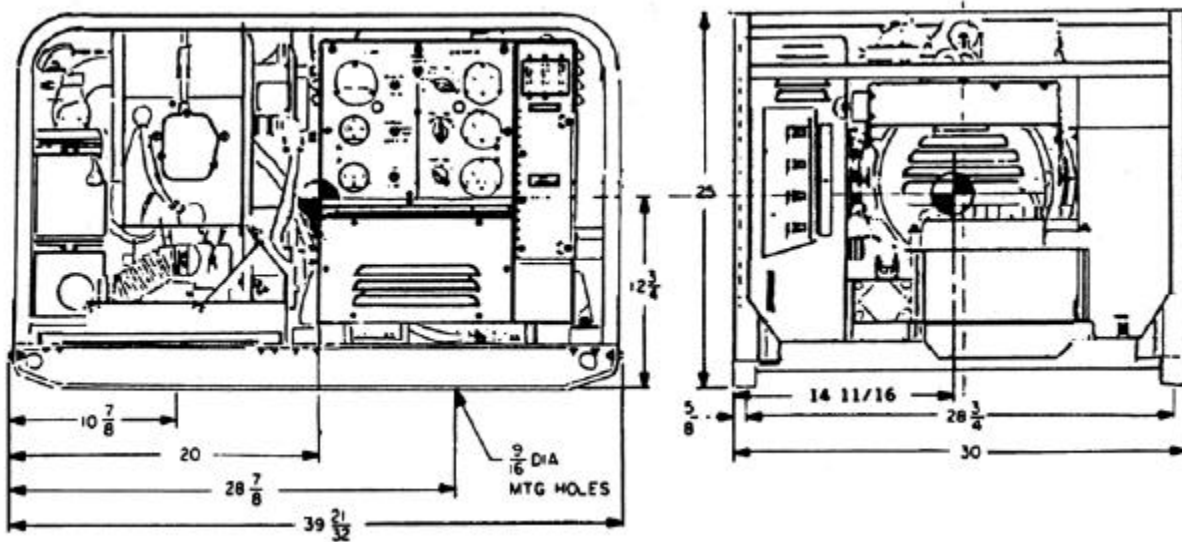


FIGURE E-7 5 kW, GED, Generator Set - Continued

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MIL-HDBK-633F

APPENDIX E
CHARACTERISTICS DATA SHEET
5 kW, DED, 60 Hz Generator Set

Nomenclature	Gen Set, DED, 5 kW, 60 Hz
Model Number	MEP-002A
NSN	6115-01-465-1044
LIN	J35813
SSN	M535
Weight	930 lb
Dimensions (LxWxH) (in)	50.6 x 32.0 x 37.0 (35 ft ³)
Trailer mounted configuration	PU-751/M, FIG E-9 PP-AN/MJQ-16, FIG E-10

Configuration: Skid mounted, fork lift guides provided.

Engine: 2 cylinder Diesel, 9.0 horsepower @ 1800 RPM, 24 Volt starter.

Fuels: Diesel: DL-1, DL-2 and Jet fuel: JP-8, Jet A-1. Fuel consumption: 0.57 gal/hour @ rated load. Fuel capacity: 6.75 gal.

Electrical: Drip proof generator enclosure, fungus & moisture treated, solid state voltage regulator, brushless rotary alternator.

Reliability: 500 hr MTBF (specified).

Protective Devices: Overload, short circuit, low oil pressure, high temp.

Instrumentation: Hourmeter, voltmeter, frequency meter, ammeter, oil pressure gage, battery charging ammeter.

EMI: Suppressed to MIL-STD-461 limits. EMP: not protected.

Connection	120/208V, 3 ph, 4 wire	120/240V, 1 ph, 3 wire	120V, 1 ph, 2 wire
Volt adj range	205 V - 220 V	228 V - 252 V	114 V - 126 V
Freq adj range	±3%		

Electric Power Rating: 5 kW @ 0.8 pf from -25 °F (-65 °F w/ wint kit) to 125 °F/MSL, 107 °F/ 5000 ft; 4.5 kW to 95 °F/8000 ft.

Electric Power Quality	Voltage	Frequency
Short term steady st stability (30 sec)	2% bandwidth	2% bandwidth
Long term steady state stability (4 hr)	4% bandwidth	3% bandwidth
Application/Rejection of rated load recovery	20% dip/20% rise 3 sec	3% und/4% over 3 sec
Max waveform deviation factor	6% (1 ph); 5% (3 ph)	
Individual waveform harmonic	3%	
motor load	35% dip, 5 sec recovery	
Regulation	3%	3%

Environmental Capability: -25 °F to 125 °F, rain, humidity, altitude, sand/dust, transportation, cold storage, salt spray, fungus.

Noise: 79 dBA @ 25 feet.

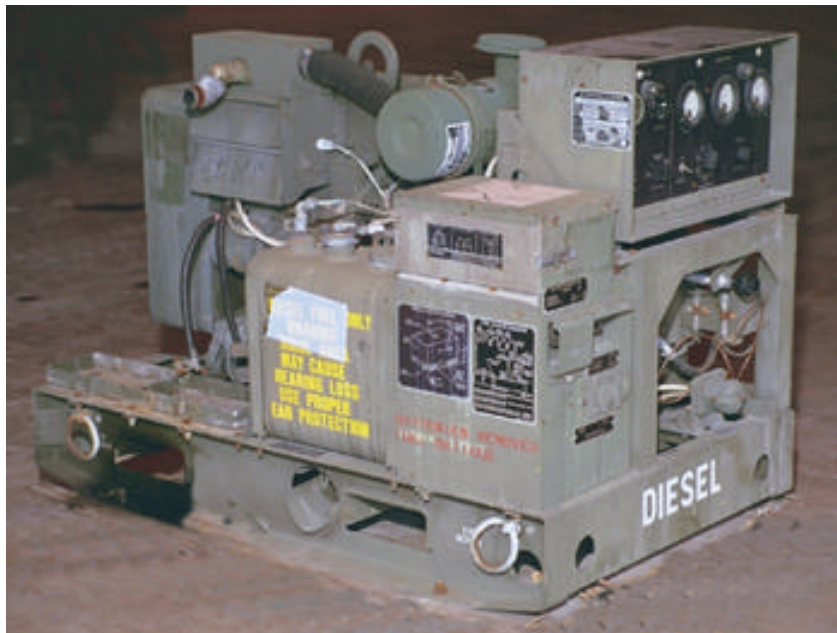
Human Factors: MIL-STD-1474. Operable in arctic and NBC clothing.

Optional Equipment			
description	NSN	Weight (lb)	Effect on Dim.(in)
Aux fuel burning wint kit		350 max	41 x 40 x 26

Technical Manuals			
Army	Air Force	Marine Corps	Navy
TM5-6115-548-12	TO35C2-3-456-1	TM 05682C-12	NAVFAC P-8-622-12
TM5-6115-548-34	TO35C2-3-456-2	TM 05682C-34	NAVFAC P-8-622-34
TM5-6115-548-24P	TO35C2-3-456-4	SL-4-05682C	NAVFAC P-8-622-24P
LO5-6115-584-12			

FIGURE E-8 5 kW, DED, 60 Hz Generator Set

APPENDIX E
CHARACTERISTICS DATA SHEET
5 kW, DED, 60 Hz Generator Set



MEP-002A

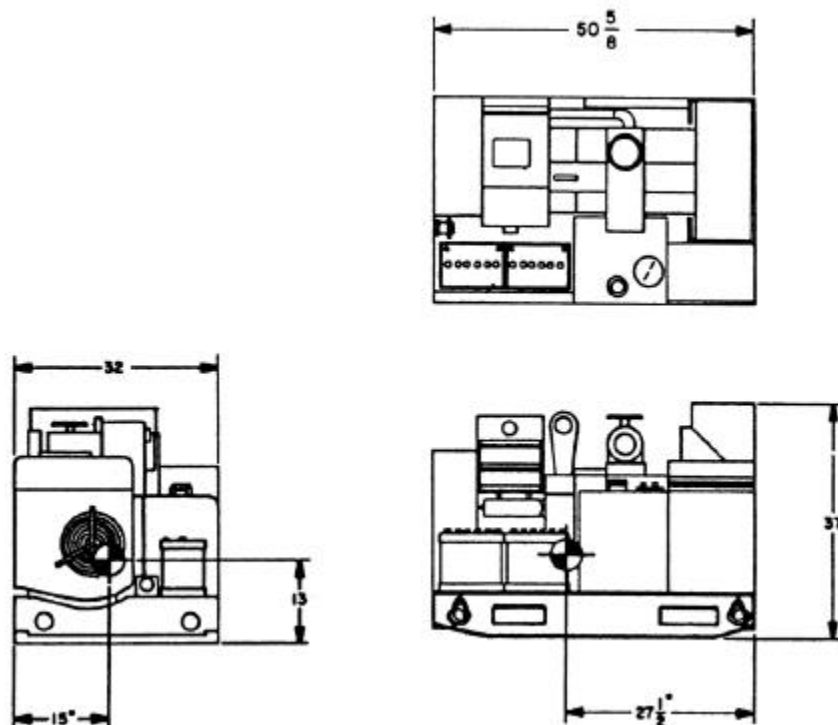


FIGURE E-8 5 kW, DED, 60 Hz Generator Set - Continued

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MIL-HDBK-633F

APPENDIX E
CHARACTERISTICS DATA SHEET
PU-751/M, POWER UNIT, DED, 5 kW, 60 Hz, TRLMTD

NSN	6115-00-033-1373	Dimensions (in.)	142.0 x 73.5 x 78.4
LIN	G37273	Op. Weight	2644 lb.
SSN	M565	Ship weight	2720 lb
ASSMB	TA-13221E7323	Ship Cube	412 cu ft
SPEC	no longer procurable	Camouflage	97403-13226E7510

COMPONENT	QTY	FIND	IDENTIFIER
3/4 Ton modified Trailer, M116A2	1	1	97403-13221E7325
Generator set, DED, 5 kW, 60 Hz, MEP-002A	1	2	6115-01-465-1044
Accessory box	1	3	97403-13226E7737
Fire extinguisher, 5 lb., A-A-1106	1	4	4210-00-270-4512

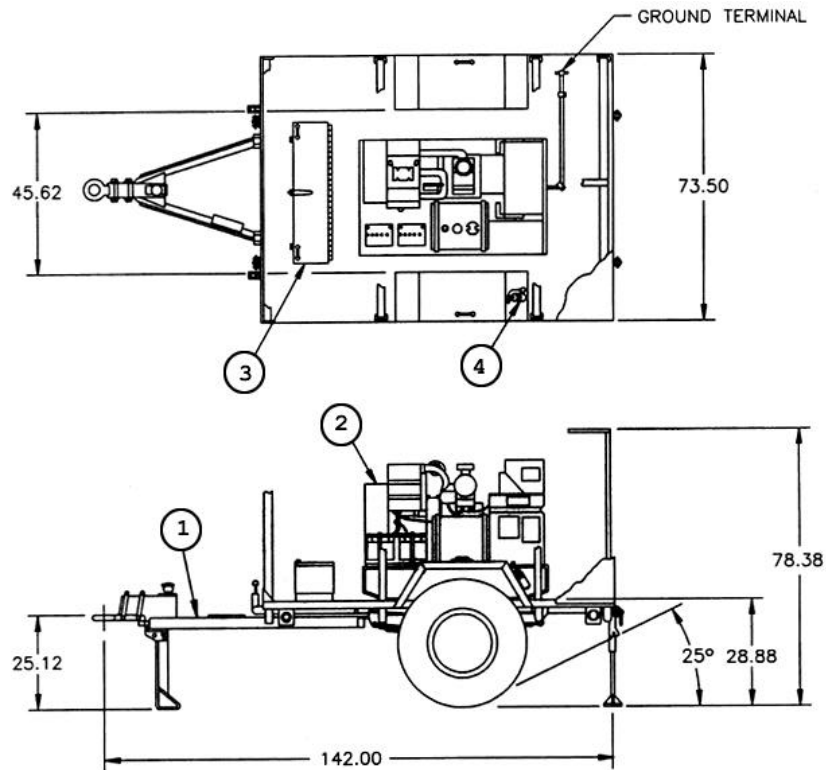


FIGURE E-9 PU-751/M

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APPENDIX E
CHARACTERISTICS DATA SHEET
PP-AN/MJQ-16, POWER PLANT, DED, 5 kW, 60 Hz, TRLMTD

NSN	6115-01-033-1395	Dimensions (in.)	171.1 x 83.0 x 98.0
LIN	P41832	Op. Weight	5308 lb.
SSN	M538	Ship weight	5160 lb
ASSMB	TA-13220E4455	Ship Cube	614 cu ft
SPEC	No longer procurable	Camouflage	97403-13226E7506

COMPONENT	QTY	FIND	IDENTIFIER
1-1/2 ton flatbed trailer, M103A3/A4	1	1	97403-13226E5858
Generator set, DED, 5 kW, 60 Hz, MEP-002A	2	2	6115-01-465-1044
Accessory box	1	3	97403-13226E7737
Fire extinguisher, 5 lb., A-A-1106	2	4	4210-00-270-4512
Switch box, 97403-13212E3601 (old)	1	5	97403-13229E6535

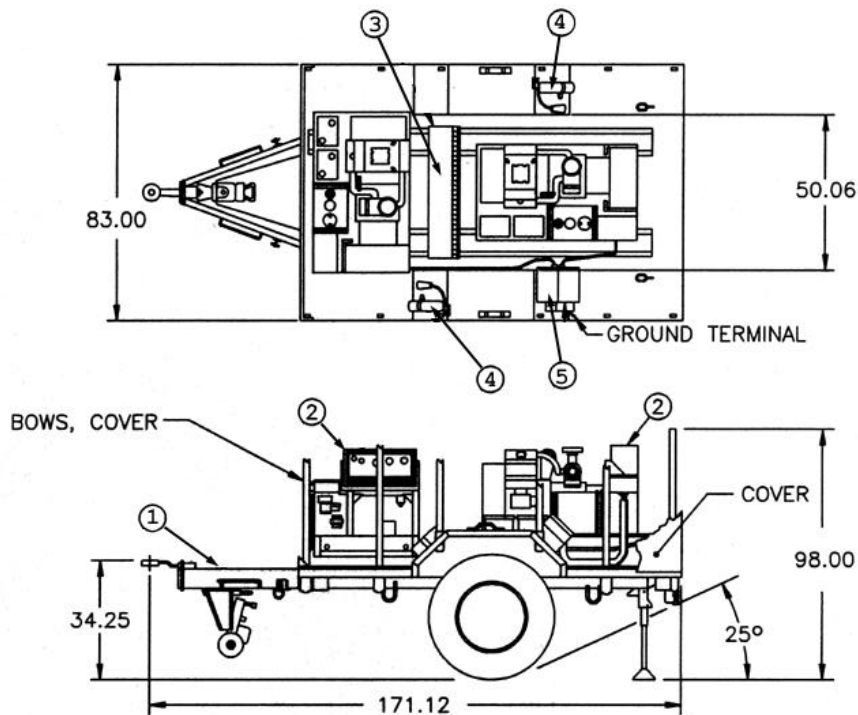


FIGURE E-10 PP-AN/MJQ-16

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MIL-HDBK-633F

APPENDIX E
CHARACTERISTICS DATA SHEET
10 kW, DED, Generator Set

Nomenclature	Gen Set, DED, 10kW, 60 Hz	Gen Set, DED, 10kW, 400 Hz
Model Number	MEP-003A	MEP-112A
NSN	6115-00-465-1030	6115-01-465-1027
LIN	J35825	G35981
SSN	M529	M565
Weight	1240 lb	1325 lb
Dimensions (LxWxH)	50.6 x 32.0 x 37.0 (35 ft ³)	50.6 x 32.0 x 37.0 (35 ft ³)
Trailer mounted configs	PU-753M, FIG E-12 PP-AN/MJQ-18, FIG E-13	PP-AN/MJQ-25, FIG E-14

Engine: 4 cylinder Diesel, 20 hp @ 1800/2000 RPM, air cooled, 24 Volt starter.

Fuels: Diesel: DL-1, DL-2 and Jet fuel: JP-8, Jet A-1. Fuel consumption: 1.09 gal/hour @ rated load. Fuel capacity: 12.5 gal.

Electrical: Drip proof generator enclosure, fungus & moisture treated, solid state voltage regulator, brushless rotary alternator.

Reliability: 500 hr MTBF (specified).

Protective Devices: Overload, short circuit, low oil pressure, high temp.

Instrumentation: Hourmeter, voltmeter, frequency meter, ammeter, oil pressure gage, battery charging ammeter.

EMI: Suppressed to MIL-STD-461 limits. EMP: none

Connection	120/208V, 3 ph, 4 wire	240V, 1 ph, 3 wire	120V, 1 ph, 2 wire
Volt adj range	205 V to 220 V	228 V to 252 V	114 V to 126 V
Freq adj range	±3% - 60 Hz; ±4% - 400 Hz		

Electric Power Rating: 10 kW @ 0.8 pf from -25 °F (-65 °F w/ winterization kit) to 125 °F/MSL, 107 °F/ 5000 ft, 9 kW to 95 °F/8000 ft.

Electric Power Quality	Voltage	Frequency
Short term steady st stability (30 sec)	2% bandwidth	2% bandwidth
Long term steady state stability (4 hr)	4% bandwidth	3% bandwidth
Application/rejection of rated load recovery	20% dip/rise 3 sec	3% under/4% over 3 sec
Max waveform deviation factor	6% (1 ph); 5% (3 ph)	
Individual waveform harmonic	3% (1 ph); 2% (3 ph)	
motor load	35% dip, 5 sec recovery	
Regulation	3%	3%

Environmental Capability: -25 °F(-65 °F w/wint kit) to 125 °F, rain, humidity, altitude, sand/dust, transportation, cold storage, salt spray, fungus.

Noise: 77 dBA @ 25 feet.

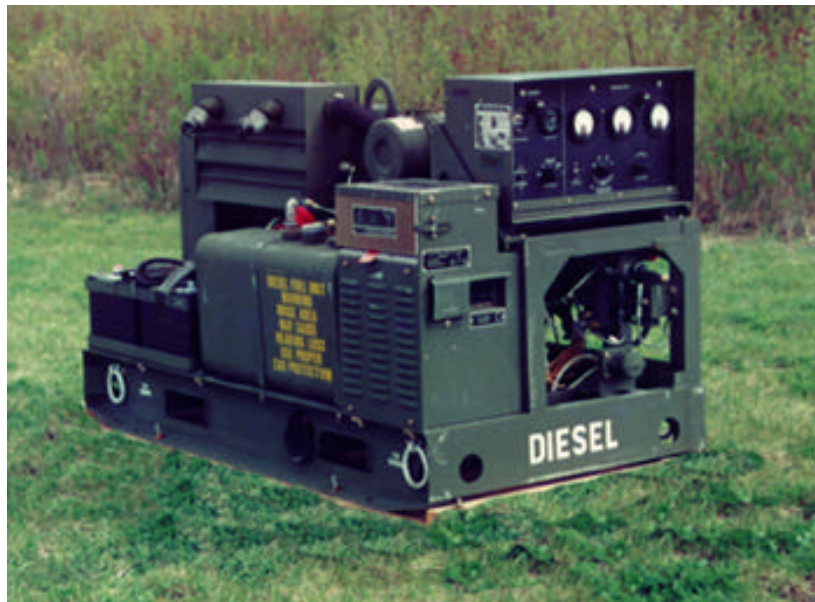
Human Factors: MIL-STD-1474. Operable in arctic and NBC clothing.

Optional Equipment			
Description	NSN	Weight (lb)	Effect on Dim.(in.)
Aux fuel burning wint kit		350 max	41 x 40 x 26

Technical Manuals			
Army	Air Force	Marine Corps	Navy
TM5-6115-585-12	TO35C2-3-455-1	TM 05684C-12	NAVFAC P-8-623-12
TM5-6115-585-34	TO35C2-3-455-2	TM 05684C-34	NAVFAC P-8-623-34
TM5-6115-585-24P	TO35C2-3-455-4	SL-4-05684C	NAVFAC P-8-623-24P

FIGURE E-11 10 kW, DED Generator Set

APPENDIX E
CHARACTERISTICS DATA SHEET
10 kW, DED, Generator Set



MEP-003A or MEP-112A

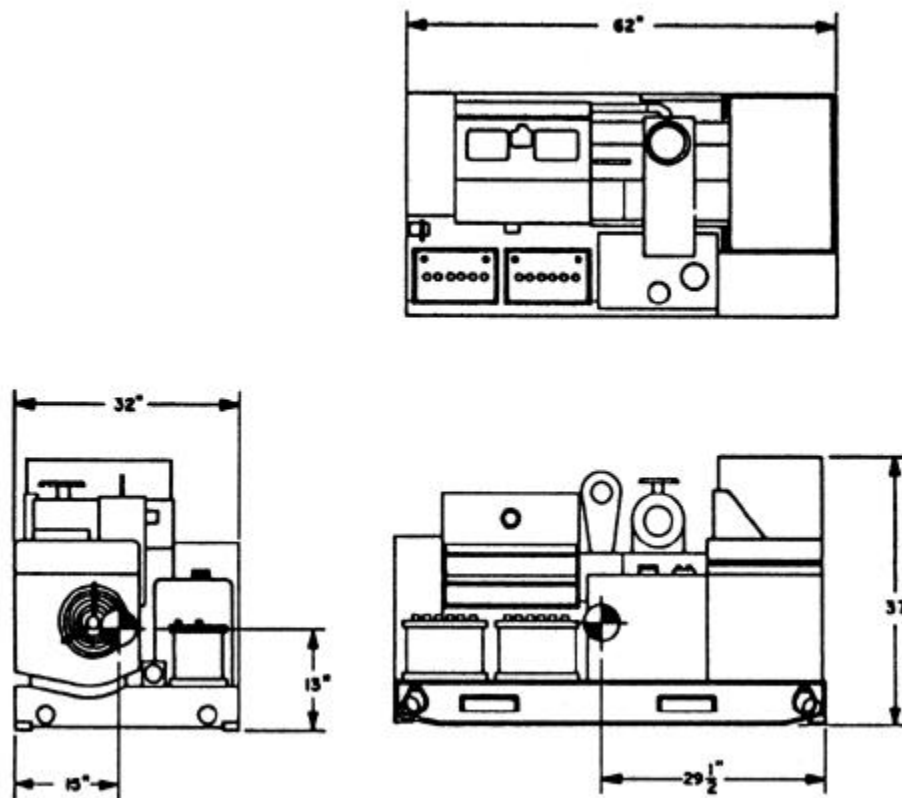


FIGURE E-11 10 kW, DED, Generator Set - Continued

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MIL-HDBK-633F

APPENDIX E
CHARACTERISTICS DATA SHEET
PU-753/M, POWER UNIT, DED, 10kW, 60 Hz, TRLMTD

NSN	6115-00-033-1389	Dimensions (in.)	142.0 x 73.5 x 78.4
LIN	G40744	Op. Weight	3040 lb.
SSN	M567	Ship weight	3060 lb
ASSMB	TA-13221E7330	Ship Cube	412 cu ft
SPEC	no longer procurable	Camouflage	97403-13226E7508

COMPONENT	QTY	find	IDENTIFIER
3/4 Ton modified Trailer, M116A2	1	1	97403-13221E7325
Generator set, DED, 10 kW, 60 Hz, MEP-003A	1	2	6115-00-465-1030
Accessory box	1	3	97403-13226E7737
Fire extinguisher, 5 lb., A-A-1106	2	4	4210-00-270-4512

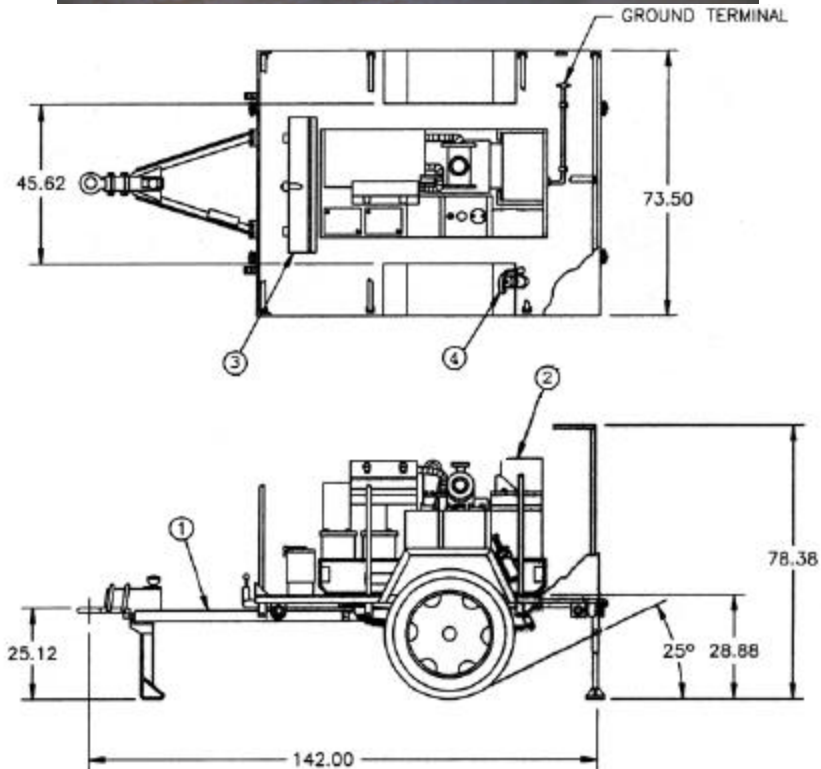


FIGURE E-12 PU-753/M

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MIL-HDBK-633F

APPENDIX E
CHARACTERISTICS DATA SHEET

PP-AN/MJQ-18, POWER PLANT, DED, 10kW, 60 Hz, TRLMTD

NSN	6115-00-033-1398	Dimensions (in.)	171.1 x 83.0 x 98.0
LIN	P28015	Op. Weight	5930 lb.
SSN	M540	Ship weight	5900 lb
ASSMB	TA-13220E4465	Ship Cube	614 cu ft
SPEC	No longer procurable	Camouflage	97403-13226E7504

COMPONENT	QTY	FIND	IDENTIFIER
1-1/2 ton flatbed trailer, M103A3/A4	1	1	97403-13226E5858
Generator set, DED, 10 kW, 60 Hz, MEP-003A	2	2	6115-00-465-1030
Accessory box	1	3	97403-13226E7737
Fire extinguisher, 5 lb., A-A-1106	2	4	4210-00-270-4512
Switch box, 97403-13226E5859 (old)	1	5	97403-13229E6535

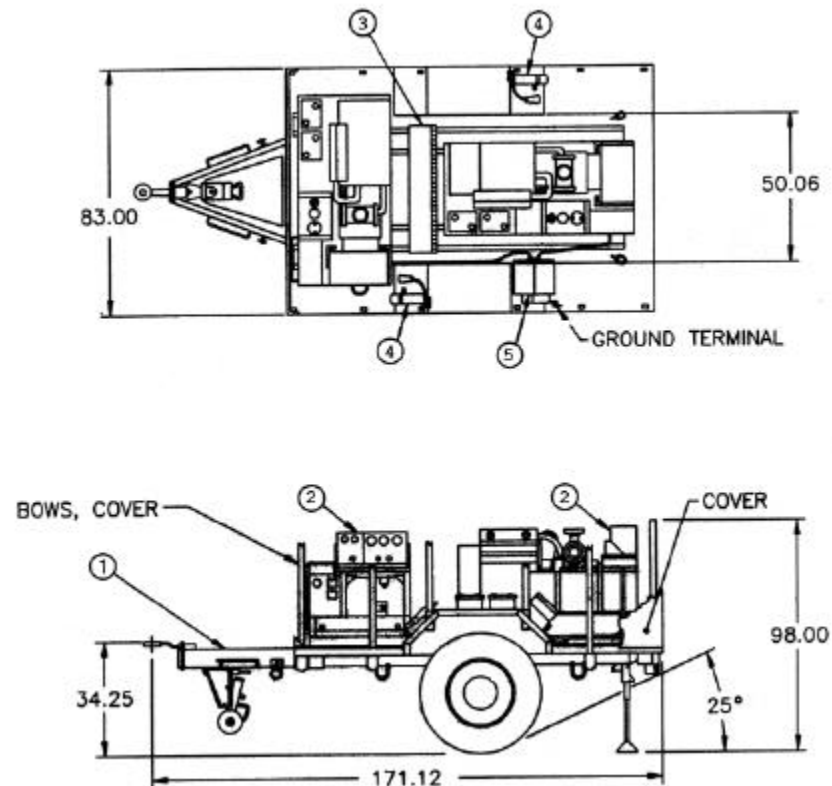


FIGURE E-13 PP-AN/MJQ-18

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MIL-HDBK-633F

APPENDIX E
CHARACTERISTICS DATA SHEET

PP-AN/MJQ-25, POWER PLANT, DED, 10kW, 400 Hz, TRLMTD

NSN	6115-01-153-7742	Dimensions (in.)	171.1 x 83.0 x 98.0
LIN	P42364	Op. Weight	5980 lb.
SSN	M523	Ship weight	5960 lb
ASSMB	TA-13226E5860	Ship Cube	614 cu ft
SPEC	no longer procurable	Camouflage	97403-13226E7512

COMPONENT	QTY	FIND	IDENTIFIER
1-1/2 ton flatbed trailer, M103A3/A4	1	1	97403-13226E5858
Generator set, DED, 10 kW, 400 Hz, MEP-112A	2	2	6115-01-465-1027
Accessory box	1	3	97403-13226E7737
Fire extinguisher, 5 lb., A-A-1106	2	4	4210-00-270-4512
Switch box	1	5	97403-13226E5859

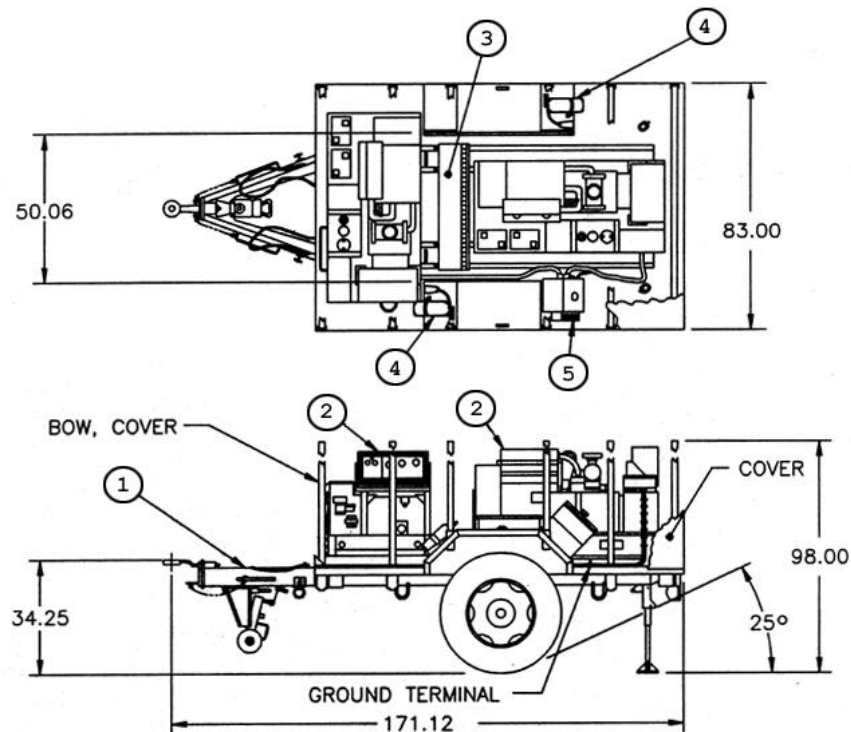


FIGURE E-14 PP-AN/MJQ-25

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MIL-HDBK-633F

APPENDIX E
CHARACTERISTICS DATA SHEET
10 kW, GED, Generator Set

Nomenclature	10 kW, 60 Hz, GED, TU	10 kW, 400 Hz, GED, TU
Model Number	MEP-018A	MEP-023A
NSN	6115-00-889-1447	6115-00-926-0843
LIN	J49398	J49466
Weight	850 lb.	650 lb.
Dimensions (LxWxH)	57.0 x 30.0 x 28.4; 28 ft ³	51.0 x 30.0 x 27.0; 24 ft ³

Configuration: Tubular frame skid, lifting attachments provided.

Engine: 4 cylinder gasoline, 20 hp @ 3600(60 Hz)&3428(400 Hz) RPM, rope and 24 VDC start, air cooled.

Fuels: Automotive gasolines, (emergency - aviation gasolines); Fuel consumption: 2.4 gal/hour @ rated load. Fuel capacity: 5.0 gal.

Electrical: Drip proof generator enclosure, fungus & moisture treated, solid state voltage regulator, brushless rotary exciter.

Instrumentation: Voltmeter, frequency meter, ammeter, hourmeter, oil pressure gage, battery charging ammeter.

Protective Devices: Short circuit, low oil pressure.

Reliability: 250 hr MTBF (specified)

EMI: Suppressed to MIL-STD-461 limits. EMP: none.

Connection	120/208V, 3ph, 4 wire	120/240V, 1ph, 3 wire	120V, 1ph, 2 wire
Volt adj range	197 V - 218 V	228 V -252 V	114 V - 126 V

Electric Power Rating: 10 kW @ 0.8 pf from -25 °F (-65 °F w/ wint kit) to 125°F/MSL, 107 °F/ 5000 ft, 95 °F/8000 ft.

Electric Power Quality	AC Voltage	Frequency
Short term steady st stability (30 sec)	1% bandwidth	1% bandwidth
Long term steady state stability (4 hr)	1% bandwidth	2% bandwidth
Application/rejection of rated load recovery	20% dip/rise 2 sec	3% under/5% over 4 sec/6 sec
motor load; recovery time	40% dip; 4 sec	
Max waveform deviation factor	6%-1ph; 5%-3ph	
Individual waveform harmonic	2%	
Regulation	3%; 4% - 240V 3 wire	3%

Environmental Capability: rain, humidity, altitude, sand/dust, transportation, 3 foot drop, vibration, cold storage: -45 °F, salt spray, fungus. Operable at incline to 15%.

Noise: 82 dBA @ 25 ft.

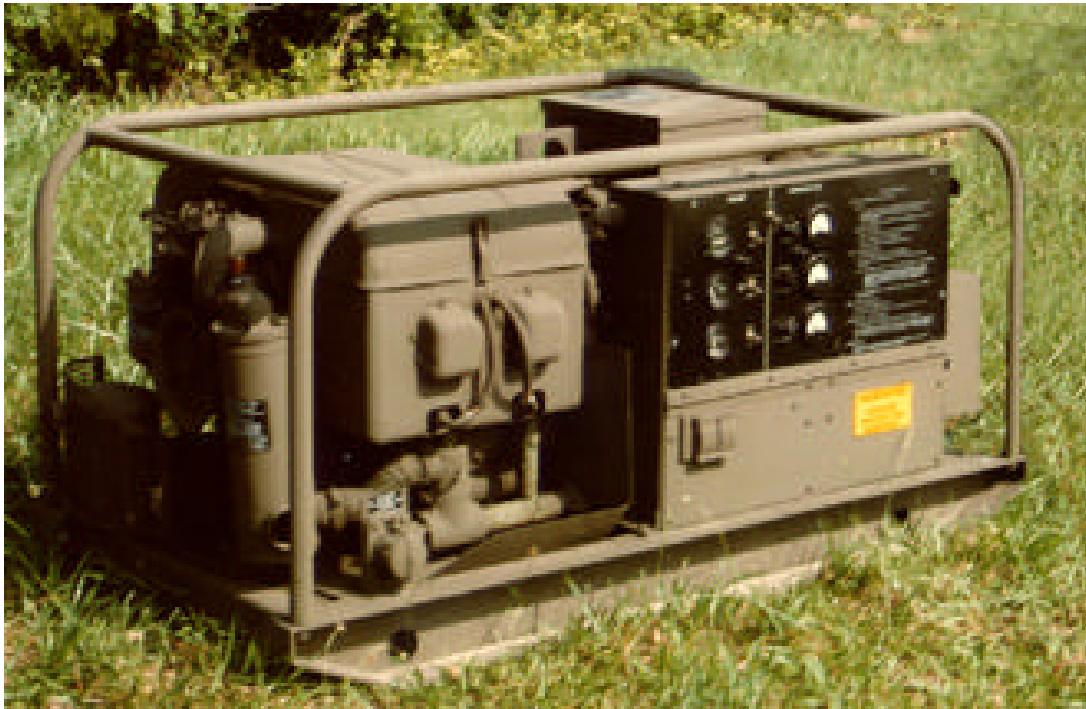
Human Factors: MIL-STD-1474.

Optional Equipment			
Description	NSN	Weight (lb.)	Effect on Dim.(in.)
Spark arrester kit	2990-01-032-3750		none
Canvas cover (wint kit)	6115-00-066-4933	10	negligible
Torch (wint kit)	4520-00-710-4341		negligible

Technical Manuals			
Army	Air Force	Marine Corps	Navy
TM5-6115-275-14	TO35C2-3-452-1		P-8-615-14
TM5-6115-275-24P	TO35C2-3-452-24		P-8-615-24P
TM5-2805-259-14	TO38G2-89-41	TM-03524B-14	
TM5-2805-259-24P	TO38G2-89-54	SL-4-035-24B	

FIGURE E-15 10 kW, GED, Generator Set

APPENDIX E
CHARACTERISTICS DATA SHEET
10 kW, GED, Generator Set



MEP-018A

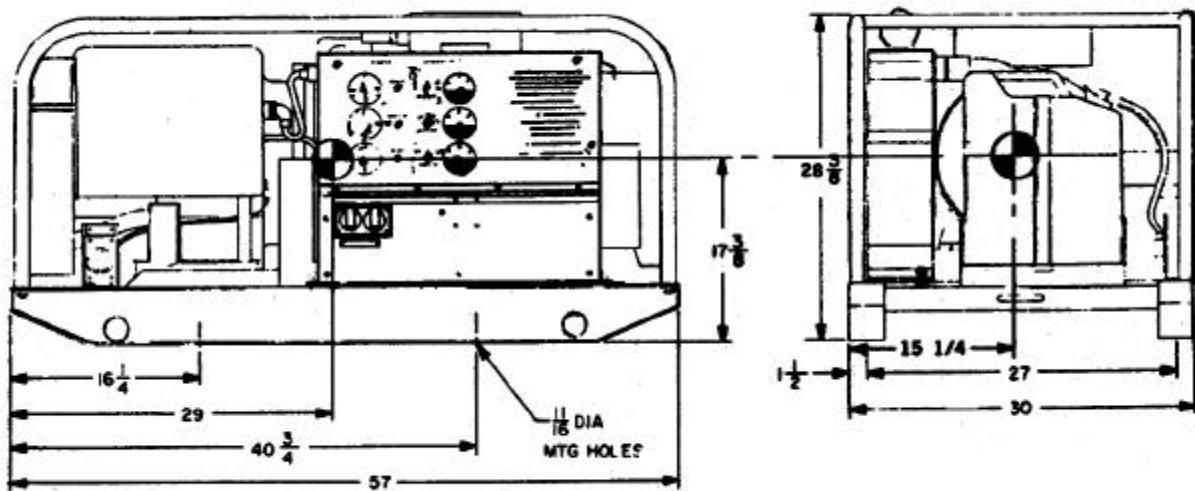


FIGURE E-15 10 kW, GED, Generator Set - Continued

DRAFT
MIL-HDBK-633F

APPENDIX E
CHARACTERISTICS DATA SHEET
15 kW DED Generator set

Nomenclature	Gen Set, DED, 15 kW, 50/60 Hz	Gen Set, DED, 15 kW, 400 Hz
Model Number	MEP-004A	MEP-113A
NSN	6115-00-118-1241	6115-00-118-1244
LIN	J35835	J36006
SSN	M549	M526
Weight	2450 lb	2500 lb
Dimens (LxWxHin)	69.8 x 35.8 x 54.6 (75 ft ³)	69.8 x 35.8 x 54.6 (75 ft ³)
Trailer mounted configurations	PU-405A/M; FIG E-17	PU-732/M; FIG E-18 AN/MJQ-15; FIG E-19

Engine: 4 cylinder Diesel, 41 hp @ 1500/1800 RPM (50/60 Hz), 45 hp @ 2000 RPM (400 Hz), liquid cooled, 24 Volt starter.

Fuels: Diesel: DL-1, DL-2 and Jet fuel: JP-8, Jet A-1. Fuel consumption: 1.5 gal/hour @ rated load. Fuel capacity: 15 gal.

Electrical: Drip proof generator enclosure, fungus & moisture treated, solid state voltage regulator, brushless rotary alternator.

Electric Power Rating: 15 kW, 60 Hz (12.5 kW, 50 Hz) @ 0.8 pf from -25 °F (-65 °F w/wint kit) to 125 °F/MSL; 107 °F/ 5000 ft.

Connection	120/208V, 3 phase, 4 wire			240/416V, 3 phase, 4 wire		
Frequency	50 Hz	60 Hz	400 Hz	50 Hz	60 Hz	400 Hz
Volt adj range	190 - 213	380 - 426	197 - 240	395 - 480	197 - 229	395 - 458
Freq adj range	±50%		390-420 Hz	±50%		390-420 Hz

Reliability: 670 hr (50/60 Hz), 370 hr (400 Hz) MTBF (specified).

Protective Devices: Overload, over voltage, short circuit, reverse power, low oil pressure, high temperature, low fuel, overspeed.

Instrumentation: Hourmeter, voltmeter, frequency meter, ammeter, wattmeter, oil pressure, battery charge, fault indicating system, water temp, fuel.

EMI: Suppressed to MIL-STD-461 limits. EMP: Not protected.

Electric Power Quality	50/60 Hz		400 Hz	
	Volt	Freq	Volt	Freq
Short term steady state stab (30 sec)	2% bandwth	2% bandwth	1% bandwth	0.5% bw
Long term steady state stab (4 hr)	4% bandwth	3% bandwth	2% bandwth	1% bandwth
Application/rejection of rated load recovery	20% 3 sec	3%/4% 3 sec	12% 0.5 sec	1.5% 1 sec
Max waveform deviation factor	5%		5%	
Individual waveform harmonic	2%		2%	
motor load recovery	40% dip 5 sec		25% dip 0.7 sec	
Regulation	3%	2-3% (adj)	1%	0.25%

Environmental Capability: -25 °F to 125 °F, rain, humidity, altitude, sand/dust, transportation, -65 °F cold storage, salt spray, fungus.

Human Factors: MIL-STD-1474. Noise: 80 dBA @ 25 feet.

Optional Equipment	NSN	W (lb)	Effect on Dim.(in.)
fuel burning wint kit	6115-00-463-9083	45	int
electrical wint kit	6115-00-463-9085	40	int
Aux fuel burning wint kit	6115-00-463-9098	350	41 x 40 x 26 (Aux)
Aux electrical wint kit	6115-00-463-9099	260	36 x 27 x 19 (Aux)
Remote control box	6115-00-420-8490	8	int
Load bank	6115-00-291-9201	104	L+9
Wheel mounting kit	6115-00-463-9094	564	L+8 W+32 H+9
Auto load tranf panel 60 Hz	6115-00-471-7932	825	44 x 19 x 42 (Aux)
Paralleling cable	6140-00-197-4934	4	negligible
Precise relay assembly	6115-00-368-8202		int
Spark arrester kit	2990-01-032-0756	7.5	L+12

FIGURE E-16 15 kW, DED Generator Set

DRAFT
MIL-HDBK-633F

APPENDIX E
CHARACTERISTICS DATA SHEET
15 kW, DED, Generator Set

Technical Manuals:

Army	Air Force	Marine Corps	Navy
TM5-6115-464-12	TO35C2-3-445-1	TM 07523A-12	NAVFAC P-8-624-12
TM5-6115-464-34	TO35C2-3-445-2	TM 07523A-34	NAVFAC P-8-624-34
TM5-6115-464-24P	TO35C2-3-445-4	SL-4-07523A	NAVFAC P-8-624-24P
LO-5-6115-464-12			



MEP-004A or MEP-113A

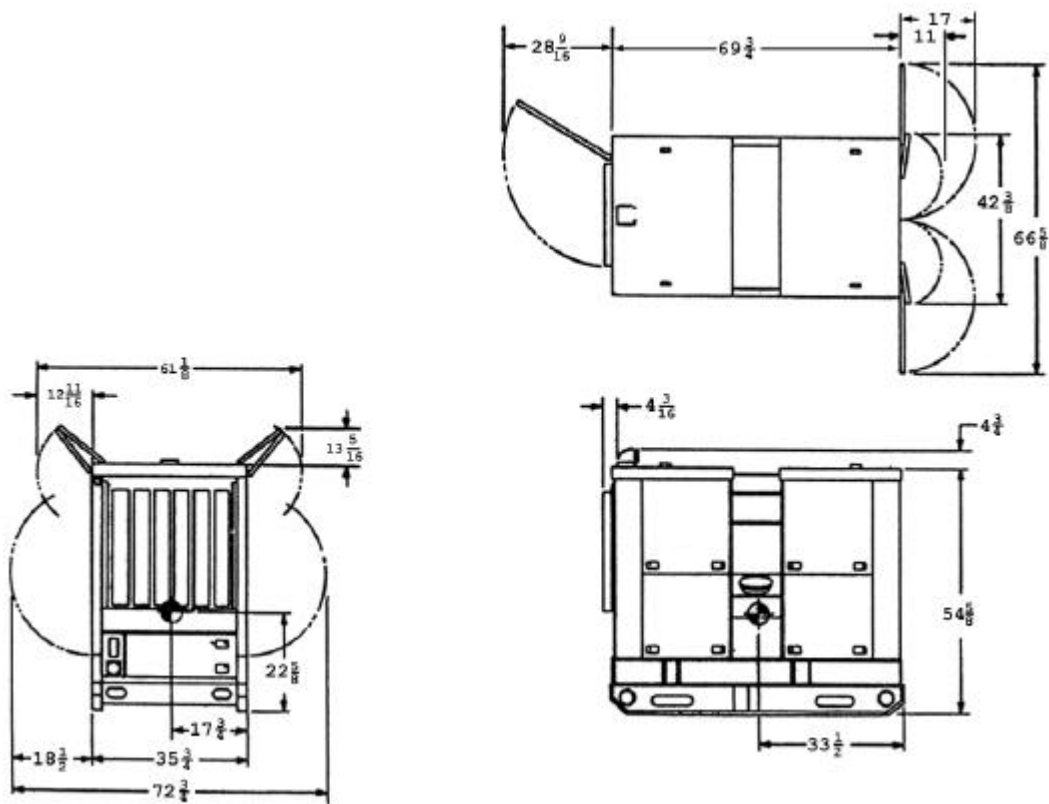


FIGURE E-16 15 kW, DED, Generator Set - Continued

DRAFT
MIL-HDBK-633F

APPENDIX E
CHARACTERISTICS DATA SHEET
PU-405A/M, POWER UNIT, DED, 15 kW, 50/60 Hz, TRLMTD

NSN	6115-00-394-9577	Dimensions (in.)	161.9x 95.5 x 85.0
LIN	J35492	Op. Weight	5970 lb.
SSN	M500	Ship weight	5860 lb
ASSMB	TA-13220E6322	Ship Cube	800 cu ft
SPEC	no longer procurable	Camouflage	97403-13226E7154

COMPONENT	QTY	FIND	IDENTIFIER
2-1/2 Ton modified Trailer, M200A1	1	1	97403-13214E1257
Generator set, DED, 15 kW, 60 Hz, MEP-004A	1	2	6115-00-118-1241
Accessory box	1	3	97403-13226E7737
Fire extinguisher, 5 lb, A-A-1106	1	4	4210-00-270-4512

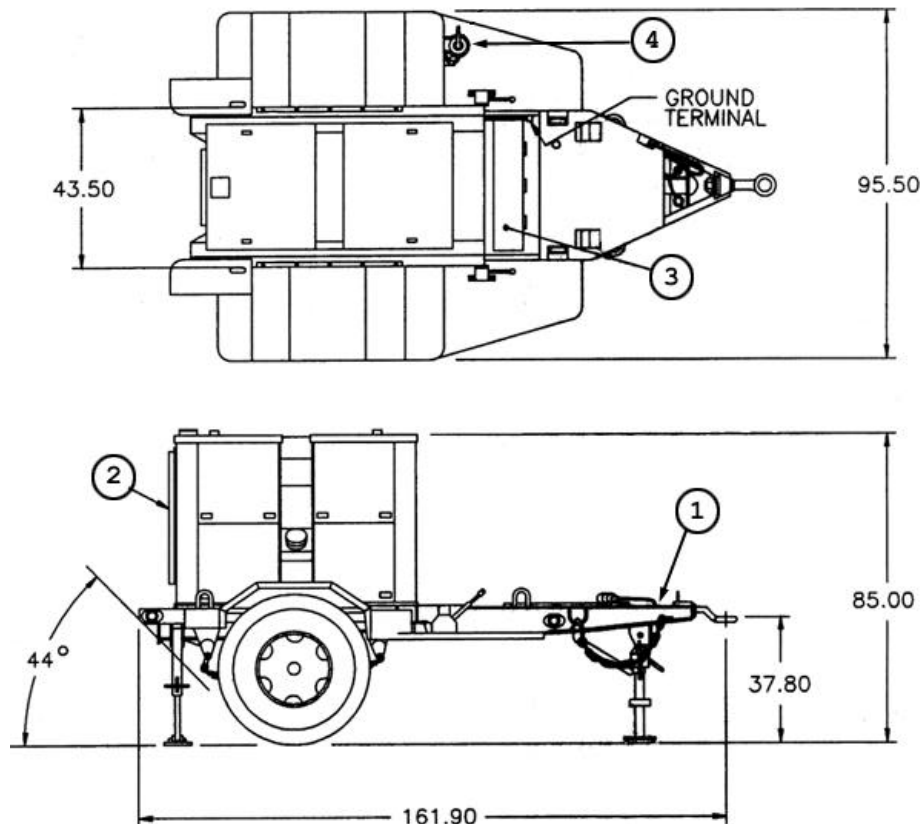


FIGURE E-17 PU-405A/M

DRAFT
MIL-HDBK-633F

APPENDIX E
CHARACTERISTICS DATA SHEET
PU-732/M, POWER UNIT, DED, 15 kW, 400 Hz, TRLMTD

NSN	6115-00-260-3082	Dimensions (in.)	161.9 x 95.5 x 85.0
LIN	G36074	Op. Weight	6080 lb.
SSN	M521	Ship weight	5900 lb
ASSMB	TA-13220E6645	Ship Cube	800 cu ft
SPEC	no longer procurable	Camouflage	97403-13226E7154

COMPONENT	QTY	FIND	IDENTIFIER
2-1/2 Ton modified Trailer, M200A1	1	1	97403-13214E1257
Generator set, DED, 15 kW, 400 Hz, MEP-113A	1	2	6115-00-118-1244
Accessory box	1	3	97403-13226E7737
Fire extinguisher, 5 lb., A-A-1106	1	4	4210-00-270-4512

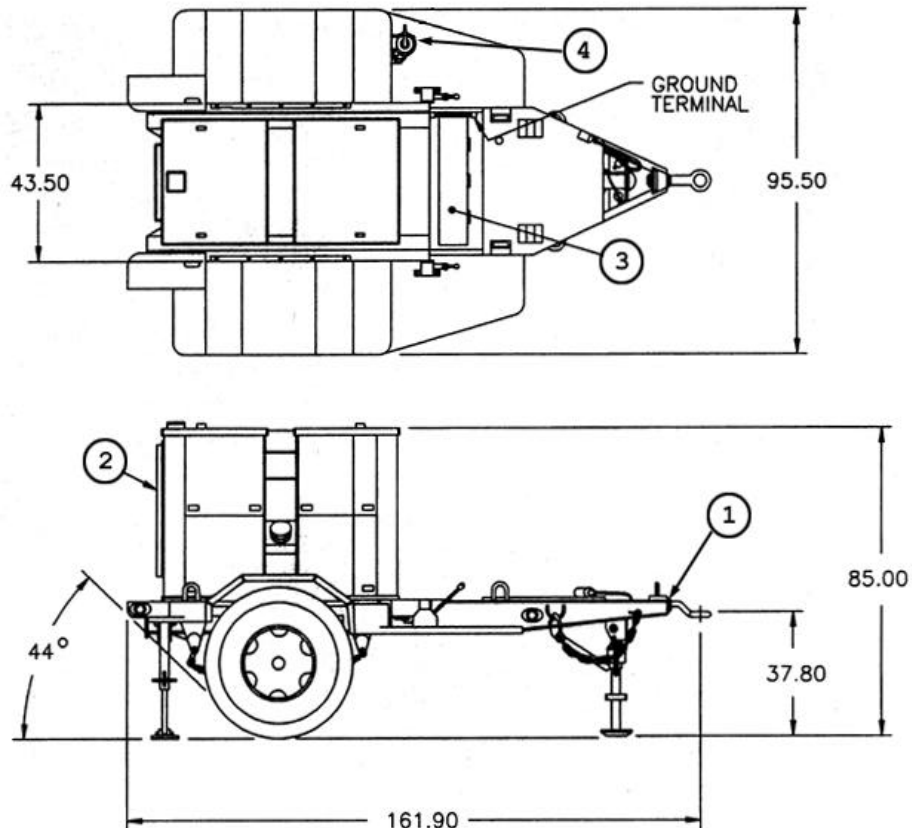


FIGURE E-18 PU-732/M

DRAFT
MIL-HDBK-633F

APPENDIX E
CHARACTERISTICS DATA SHEET

PP-AN/MJQ-15, POWER PLANT, DED, 15 kW, 400 Hz, TRLMTD

NSN	6115-00-400-7591	Dimensions (in)	161.9x95.5x85.0 (each of two units)
LIN	P28075	Op. Weight	6180 lb (unit A) 6155 lb (unit B)
SSN	M563	Ship weight	6020 lb(unit A) 6000 lb (unit B)
ASSMB	TA-13220E8042	Ship Cube	800 cu ft (each unit)
SPEC	not procurable	Camouflage	97403-13226E7154

COMPONENT	QTY	FIND	IDENTIFIER
2-1/2 ton flatbed trailer, M200A1	2	1	97403-13214E1257
Generator set, DED, 15 kW, 400 Hz, MEP-113A	2	2	6115-00-118-1244
Accessory box	2	3	97403-13226E7737
Fire extinguisher, 5 lb., A-A-1106	2	4	4210-00-270-4512
Switch box (unit A), 97403-13220E6400 (old)	1	5	97403-13229E5795
Cable assembly	1	6	97403-13220E6427

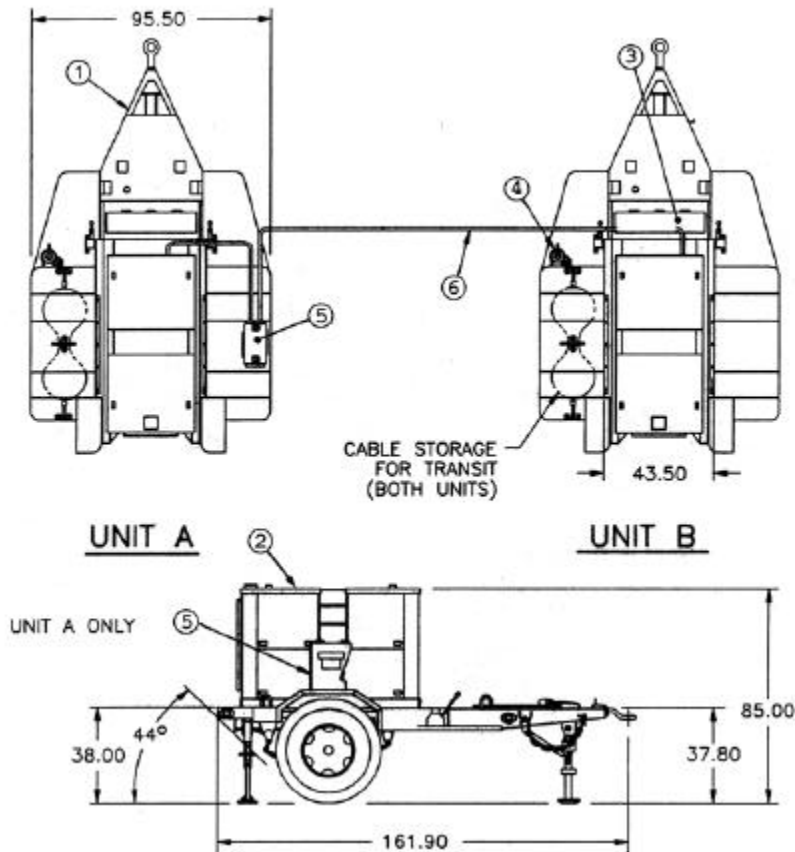
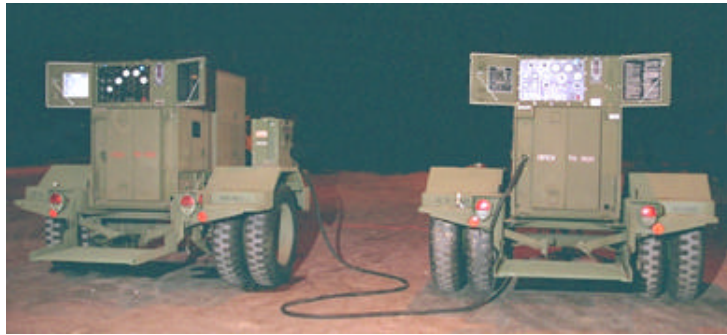


FIGURE E-19 PP-AN/MJQ-15

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APPENDIX E
CHARACTERISTICS DATA SHEET
30 kW, DED, Generator Set

Nomenclature	Gen Set, DED, 30 kW, 50/60 Hz	Gen Set, DED, 30 kW, 400 Hz
Model Number	MEP-005A	MEP-114A
NSN	6115-00-118-1240	6115-00-118-1248
LIN	J36109	J36725
SSN	M532	M501
Weight	2850 lb	3000 lb
Dimensions (LxWxHin)	79.3 x 35.8 x 54.6 (90 ft ³)	79.3 x 35.8 x 54.6 (90 ft ³)
Trailer mounted configurations	PU-406B/M; FIG E-21 AN/MJQ-10A; FIG E-23	PU-760/M; FIG E-22

Engine: 6 cylinder Diesel, 57 hp @ 1800 RPM (60 Hz), 64 hp @ 2000 RPM (400 Hz), liquid cooled, 24 Volt starter.

Fuels: Diesel: DL-1, DL-2 and Jet fuel: JP-8, Jet A-1. Fuel consumption: 3 gal/hour @ rated load. Fuel capacity: 26 gal.

Electrical: Drip proof generator enclosure, fungus & moisture treated, solid state voltage regulator, brushless rotary alternator.

Voltage Con: 120/208 V, 3 phase, 4 wire; 240/416 V, 3 phase, 4 wire.

Operating freq	50 Hz		60 Hz		400 Hz	
Connection	120/208V	240/416V	120/208V	240/416V	120/208V	240/416V
Volt adj range	190 - 213	380 - 426	197 - 240	395 - 480	197 - 229	395 - 458

Electric Power Rating: 30 kW, 60/400 Hz (25 kW, 50 Hz) @ 0.8 pf from -25 °F (-65 °F w/ wint kit) to 125 °F/MSL, 107 °F/5000 ft.

Electric Power Quality	50/60 Hz		400 Hz	
	Volt	Freq	Volt	Freq
Regulation	3%	2-3% (adj)	1%	0.25%
Short term steady state stab (30 sec)	2%	2%	1%	0.5%
Long term steady state stab (4 hr)	4%	3%	2%	1%
Application/rejection of rated load recovery	20% 3 sec	3% /4% 3 sec	12% 0.5 sec	1.5% 1 sec
motor load recovery	40% dip 5 sec		25% dip 0.7 sec	
Max waveform deviation factor	5%		5%	
Individual waveform harmonic	2%		2%	

Reliability: 50/60 Hz: 670 hr MTBF (spec); 400 Hz: 370 hr MTBF (spec).

Protective Devices: Overload, over voltage, short circuit, reverse power, low oil pressure, high temperature, low fuel, overspeed.

Instrumentation: Hourmeter, voltmeter, frequency meter, ammeter, wattmeter, oil pressure gage, battery charging ammeter, fault indicating system, temperature, fuel.

EMI: Suppressed to MIL-STD-461 limits. EMP: none

Environmental Capability: -25 °F(-65 °F w/wint kit) to 125 °F, rain, humidity, altitude, sand/dust, transportation, cold storage, salt spray, fungus.

Noise: 80 dBA @ 25 feet.

Human Factors: MIL-STD-1474. Operable in arctic and NBC clothing.

Optional Equipment	NSN	W (lb)	Effect on Dim.(in.)
fuel burning wint kit	6115-00-463-9083	45	int
electrical wint kit	6115-00-463-9085	40	int
Aux fuel burning wint kit	6115-00-463-9098	350	41 x 40 x 26 (Aux)
Aux electrical wint kit	6115-00-463-9099	260	36 x 27 x 19 (Aux)
Remote control box	6115-00-420-8490	8	int
Load bank	6115-00-463-9088		L+9
Wheel mounting kit	6115-00-463-9094	564	L+8 W+32 H+9
Auto load tranf panel 60 Hz	6115-00-471-7932	825	44 x 19 x 42 (Aux)
Paralleling cable	6140-00-197-4934	4	negligible
Precise relay assembly	6115-00-368-8202		int
Spark arrester kit	2990-01-032-0756	7.5	L+12

FIGURE E-20 30 kW, DED Generator Set

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APPENDIX E
CHARACTERISTICS DATA SHEET
30 kW, DED, Generator Set

Technical Manuals			
Army	Air Force	Marine Corps	Navy
TM5-6115-465-12	TO35C2-3-446-1	TM 06858B/06859D-12	NAVFAC P-8-625-12
TM5-6115-465-34	TO35C2-3-446-2	TM 06858B/06859D-34	NAVFAC P-8-625-34
TM5-6115-465-24P	TO35C2-3-446-4	SL-4-06858B/06859P	NAVFAC P-8-625-24P
LO-5-6115-465-12		LO-06858A-06859A-12	



MEP-005A or MEP-114A

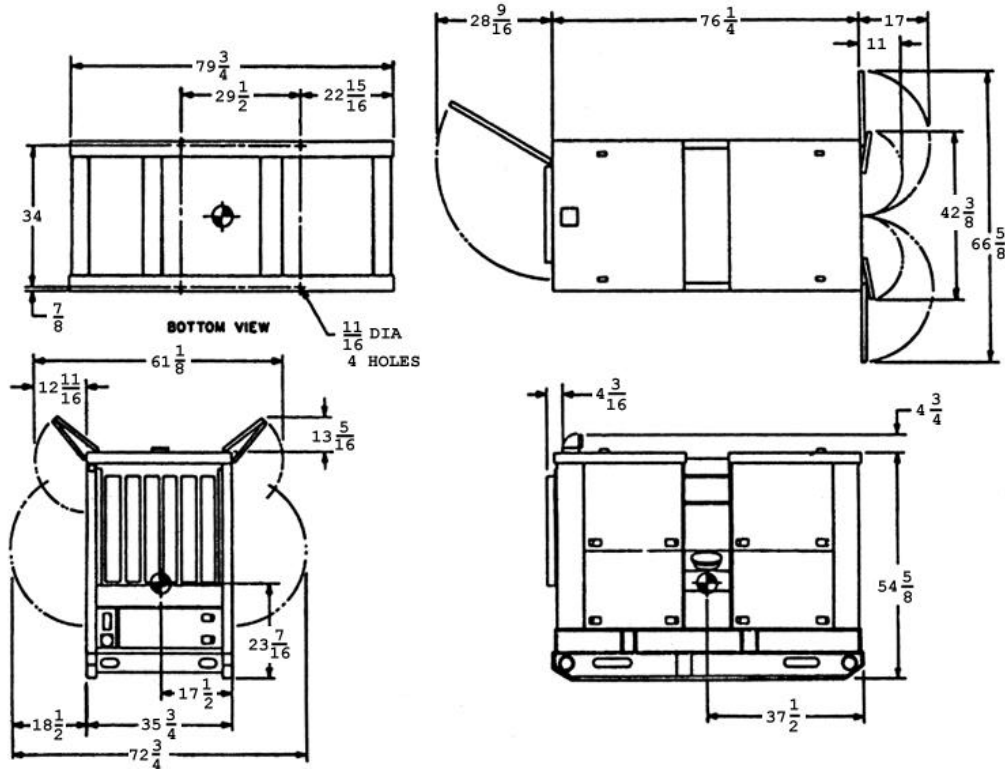


FIGURE E-20 30 kW, DED, Generator Set - Continued

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MIL-HDBK-633F

APPENDIX E
CHARACTERISTICS DATA SHEET
PU-406B/M, POWER UNIT, DED, 30 kW, 50/60 Hz, TRLMTD

NSN	6115-00-394-9576	Dimensions (in.)	161.9 x 95.5 x 87.0
LIN	J36383	Op. Weight	6530 lb.
SSN	M543	Ship weight	6380 lb
ASSMB	TA-13220E6325	Ship Cube	818 cu ft
SPEC	not procurable	Camouflage	97403-13226E7492

COMPONENT	QTY	FIND	IDENTIFIER
2-1/2 Ton modified Trailer, M200A1	1	1	97403-13214E1257
Generator set, DED, 30 kW, 60 Hz, MEP-005A	1	2	6115-00-118-1240
Accessory box	1	3	97403-13226E7737
Fire extinguisher, 5 lb., A-A-1106	1	4	4210-00-270-4512

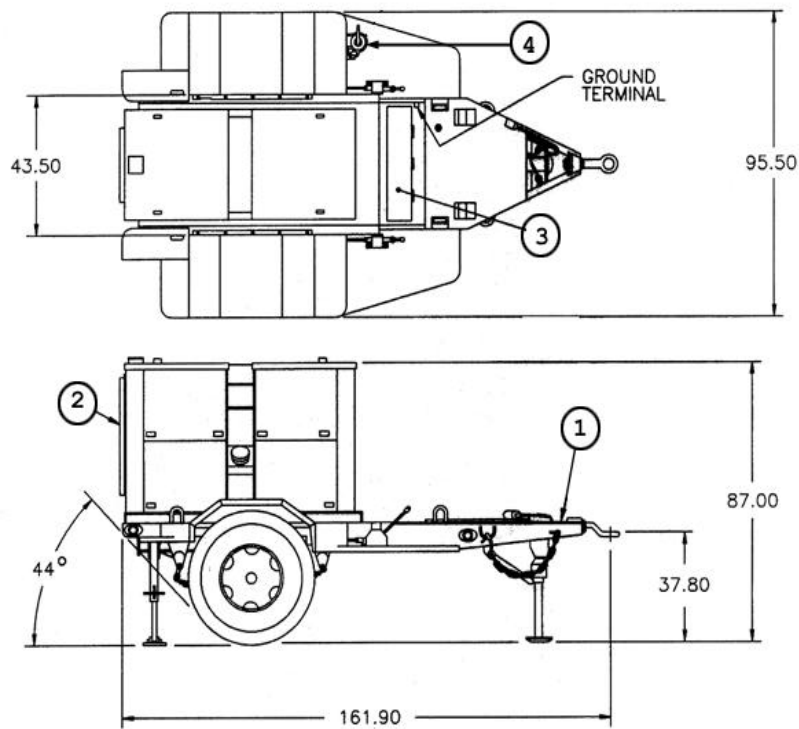


FIGURE E-21 PU-406B/M

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APPENDIX E
CHARACTERISTICS DATA SHEET
PU-760/M, POWER UNIT, DED, 30 kW, 400 Hz, TRLMTD

NSN	6115-00-394-9581	Dimensions (in.)	161.9 x 95.5 x 87.0
LIN	G53871	Op. Weight	6680 lb.
SSN	M595	Ship weight	5380 lb
ASSMB	TA-13220E6341	Ship Cube	818 cu ft
SPEC	not procurable	Camouflage	97403-13226E7492

COMPONENT	QTY	FIND	IDENTIFIER
2-1/2 Ton modified Trailer, M200A1	1	1	97403-13214E1257
Generator set, DED, 30 kW, 400 Hz, MEP-114A	1	2	6115-00-118-1248
Accessory box	1	3	97403-13226E7737
Fire extinguisher, 5 lb., A-A-1106	1	4	4210-00-270-4512

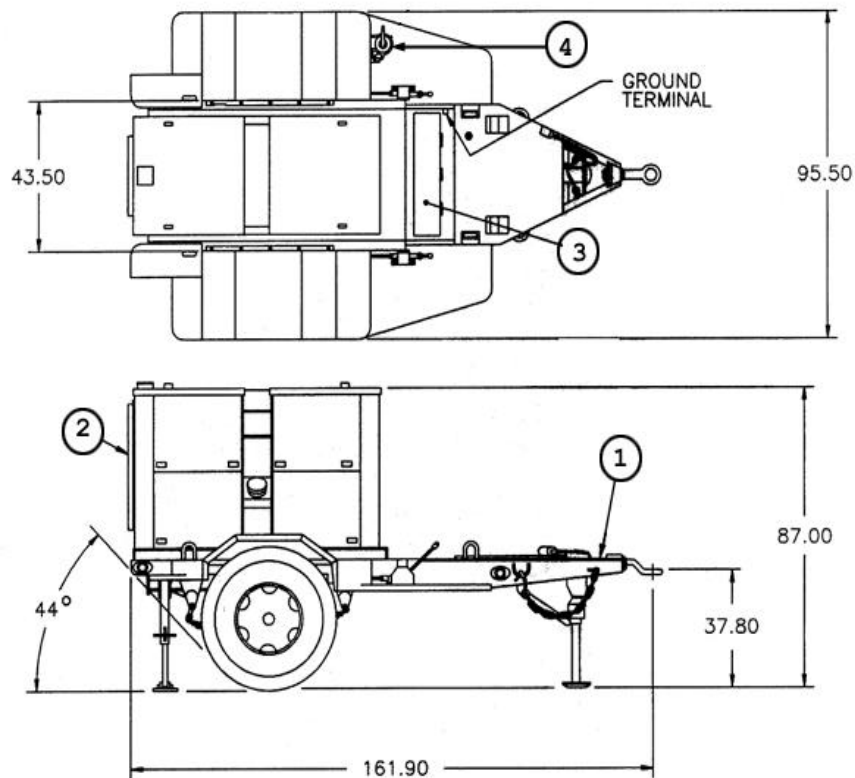


FIGURE E-22 PU-760/M

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APPENDIX E
CHARACTERISTICS DATA SHEET

PP-AN/MJQ-10A, POWER PLANT, DED, 30 kW, 50/60 Hz, TRLMTD

NSN	6115-00-394-9582	Dimensions (in)	161.9x95.5x87.0 (each)
LIN	P27819	Op. Weight	6630 lb (unit A) 6620 lb (unit B)
SSN	M519	Ship weight	6480 lb (unit A) 6420 lb (unit B)
ASSMB	TA-13220E6335	Ship Cube	818 cu ft (each unit)
SPEC	not procurable	Camouflage	97403-13226E7492

COMPONENT	QTY	FIND	IDENTIFIER
2-1/2 ton flatbed trailer, M200A1	2	1	97403-13214E1257
Generator set, DED, 30 kW, 50/60 Hz, MEP-005A	2	2	6115-00-118-1240
Accessory box	2	3	97403-13226E7737
Fire extinguisher, 5 lb., A-A-1106	2	4	4210-00-270-4512
Switch box (unit A), 97403-13229E6780 (old)	1	5	97403-13229E5795
Cable assembly	1	6	97403-13220E7718

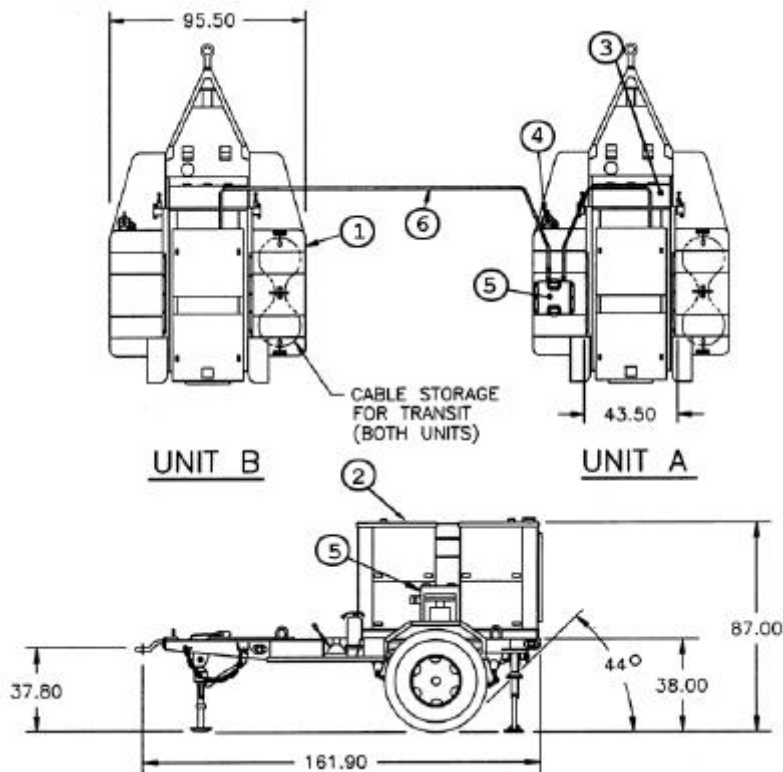


FIGURE E-23 PP-AN/MJQ-10A

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APPENDIX E
CHARACTERISTICS DATA SHEET
60 kW, DED, Generator Set

Nomenclature	Gen Set, DED, 60kW, 50/60 Hz	Gen Set, DED, 60kW, 400 Hz
Model Number	MEP-006A	MEP-115A
NSN	6115-00-118-1243	6115-00-118-1253
LIN	J38301	J38506
SSN	M531	
Weight	4240 lb	4400 lb
Dimensions (LxWxH)	87.0 x 36.0 x 59.0; 101 ft ³	87.0 x 36.0 x 59.0; 101 ft ³
Trailer mounted configurations	PU-650B/G; FIG E-25 AN/MJQ-12A; FIG E-27	PU-707A/M; FIG E-26

Engine: 6 cylinder Diesel, 167 hp @ 1800 RPM (60 Hz), 180 hp @ 2000 RPM (400 Hz), liquid cooled, 24 Volt starter.

Fuels: Diesel: DL-1, DL-2 and Jet fuel: JP-8, Jet A-1. Fuel consumption: 6 gal/hour @ rated load. Fuel capacity: 55 gal.

Electrical: Drip proof generator enclosure, fungus & moisture treated, solid state voltage regulator, brushless rotary alternator.

Reliability: 50/60 Hz: 500 hr MTBF (spec); 400 Hz: 450 hr MTBF (spec)

Protective Devices: Overload, over voltage, short circuit, reverse power, low oil pressure, high temperature, low fuel, overspeed.

Instrumentation: Hourmeter, voltmeter, frequency meter, ammeter, wattmeter, oil pressure gage, battery charging ammeter, fault indicating system, temperature, fuel.

EMI: Suppressed to MIL-STD-461 limits. EMP: not protected.

Connection	120/208V, 3 phase, 4 wire			240/416V, 3 phase, 4 wire		
Freq	50 Hz	60 Hz	400 Hz	50 Hz	60 Hz	400 Hz
Volt adj range	190 - 213	197 - 240	197 - 229	380 - 426	395 - 480	395 - 458

Electric Power Rating: 60 kW, 60 or 400 Hz; 50 kW, 50 Hz @ 0.8 pf from -25 °F (-65 °F w/ wint kit) to 125 °F/MSL, 107 °F/5000 ft.

Electric Power Quality	50/60 Hz		400 Hz	
	Volt	Freq	Volt	Freq
Regulation	3%	2-3% (adj)	1%	0.25%
Short term steady state stab (30 sec)	2%	2%	1%	0.5%
Long term steady state stab (4 hr)	4%	3%	2%	1%
Application/rejection of rated load recovery	20% 3 sec	3%/4% 3 sec	12% 0.5 sec	1.5% 1 sec
motor load recovery	40% dip 5 sec		25% dip 0.7 sec	
Max waveform deviation factor	5%		5%	
Individual waveform harmonic	2%		2%	

Environmental Capability: -25 °F(-65 °F w/wint kit) to 125 °F, rain, humidity, altitude, sand/dust, transportation, cold storage, salt spray, fungus.

Noise: 86 dBA @ 25 feet.

Human Factors: MIL-STD-1474. Operable in arctic and NBC clothing.

Optional Equipment			
Description	NSN	W (lb)	Effect on Dim.(in.)
Fuel burning wint kit	6115-00-407-8314	45	int
Electrical wint kit	6115-00-455-7693	40	int
Aux fuel burning wint kit	6115-00-463-9098	350	41 x 40 x 26 (Aux)
Aux electrical wint kit	6115-00-463-9099	260	36 x 27 x 19 (Aux)
Remote control box	6115-00-420-8490	8	int
Load bank	6115-00-407-8322	272	H+15
Wheel mounting kit	6115-00-463-9092	564	L+8 W+32 H+9
Auto load tranf panel 60 Hz	6115-00-471-7932	825	44 x 19 x 42 (Aux)
Paralleling cable	6140-00-197-4934	4	negligible
Precise relay assembly 60 Hz	6115-00-276-7622		int
Auto standby panel, 400 Hz	6115-00-463-9096	825	44 x 19 x 42 (Aux)

FIGURE E-24 60 kW, DED Generator Set

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MIL-HDBK-633F

APPENDIX E
CHARACTERISTICS DATA SHEET
60kW, DED, Generator Set

Technical Manuals			
Army	Air Force	Marine Corps	Navy
TM5-6115-545-12	TO35C2-3-444-1	TM 00038G-12	P-8-626-12
TM5-6115-545-34	TO35C2-3-444-2	TM 00038G-34	P-8-626-34
TM5-6115-545-24P	TO35C2-3-444-4	SL-4-00038G	P-8-626-24P
LO-5-6115-545-12			



MEP-006A or MEP-115A

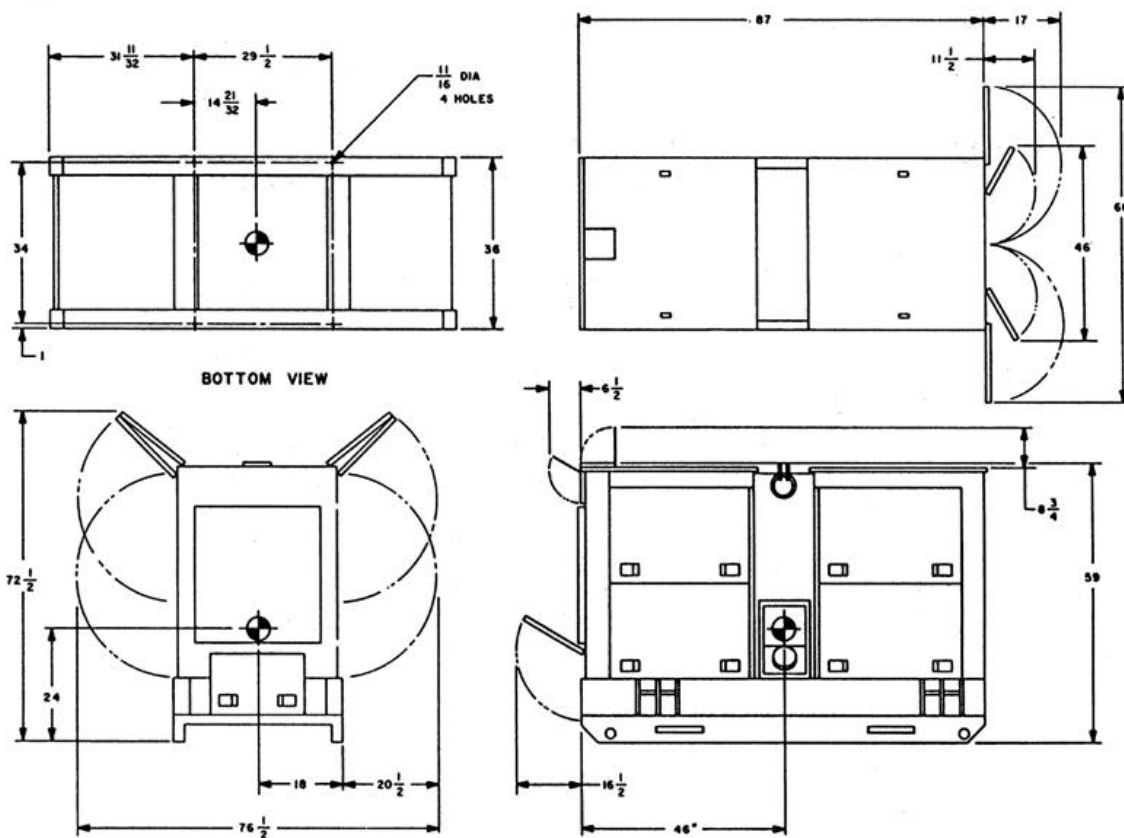


FIGURE E-24 60 kW, DED, Generator Set - Continued

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MIL-HDBK-633F

APPENDIX E
CHARACTERISTICS DATA SHEET
PU-650B/G, POWER UNIT, DED, 60kW, 50/60 Hz, TRLMTD

NSN	6115-00-258-1622	Dimensions (in.)	165.5 x 95.5 x 89.0
LIN	J35629	Op. Weight	8100 lb.
SSN	M509	Ship weight	7800 lb
ASSMB	TA-13220E4454	Ship Cube	837 cu ft
SPEC	not procurable	Camouflage	97403-13226E7494

COMPONENT	QTY	FIND	IDENTIFIER
2-1/2 Ton modified Trailer, M200A1	1	1	97403-13214E1257
Generator set, DED, 60 kW, 60 Hz, MEP-006A	1	2	6115-00-118-1243
Fire extinguisher, 5 lb., A-A-1106	1	3	4210-00-270-4512
Accessory box	1	4	97403-13226E7737

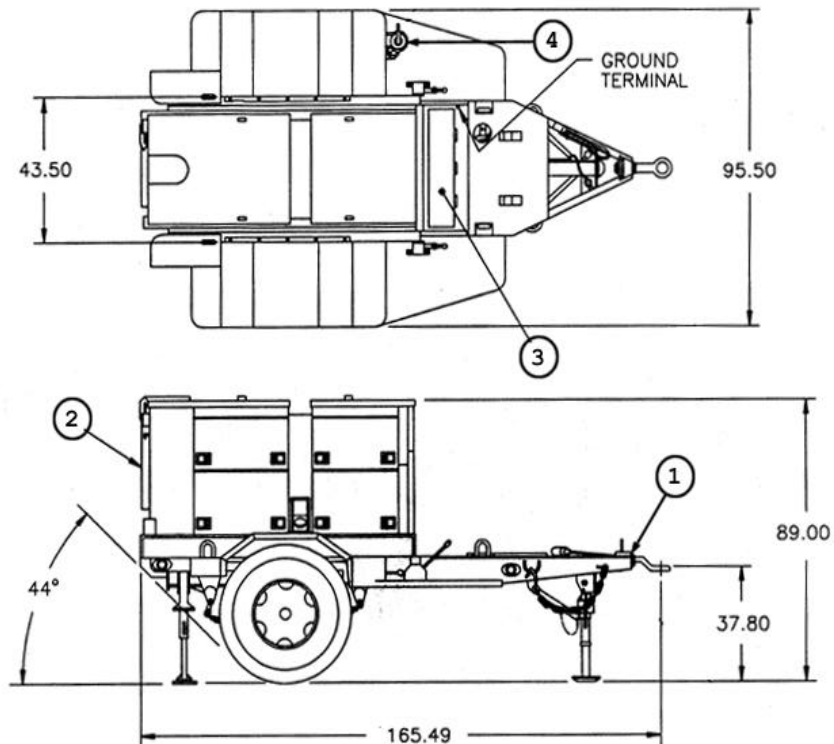


FIGURE E-25 PU-650B/G

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MIL-HDBK-633F

APPENDIX E
CHARACTERISTICS DATA SHEET
PU-707A/M, POWER UNIT, DED, 60kW, 400 Hz, TRLMTD

NSN	6115-00-394-9573	Dimensions (in.)	165.5 x 95.5 x 89.0
LIN	G52886	Op. Weight	8200 lb.
SSN	M510	Ship weight	7800 lb
ASSMB	TA-13220E6332	Ship Cube	837 cu ft
SPEC	not procurable	Camouflage	97403-13226E7494

COMPONENT	QTY	FIND	IDENTIFIER
2-1/2 Ton modified Trailer, M200A1	1	1	97403-13214E1257
Generator set, DED, 60 kW, 400 Hz, MEP-115A	1	2	6115-00-118-1253
Fire extinguisher, 5 lb., A-A-1106	1	3	4210-00-270-4512
Accessory box	1	4	97403-13226E7737

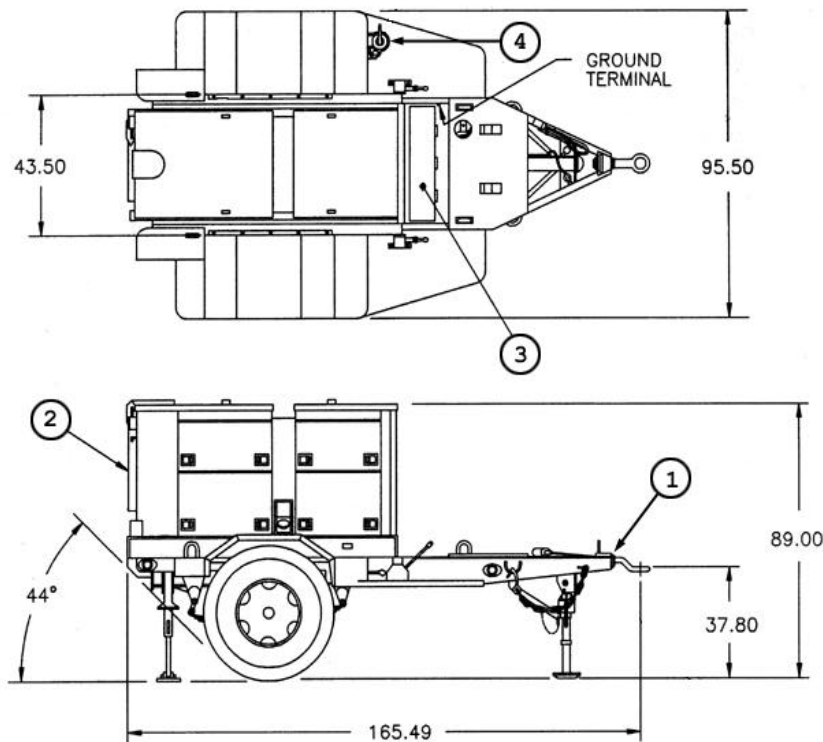


FIGURE E-26 PU-707A/M

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MIL-HDBK-633F

APPENDIX E
CHARACTERISTICS DATA SHEET

PP-AN/MJQ-12A, POWER PLANT, DED, 60kW, 50/60 Hz, TRLMTD

NSN	6115-00-257-1602	Dimensions (in.)	161.9x95.5x87.0 (each of 2 units)
LIN	P27823	Op. Weight	6630 lb (unit A) 6620 lb (unit B)
SSN	M511	Ship weight	6480 lb(unit A) 6420 lb (unit B)
ASSMB	TA-13221E7350	Ship Cube	818 cu ft (each unit)
SPEC	not procurable	Camouflage	97403-13226E7494

COMPONENT	QTY	FIND	IDENTIFIER
2-1/2 ton flatbed trailer, M200A1	2	1	97403-13214E1257
Generator set, DED, 60 kW, 50/60 Hz, MEP-006A	2	2	6115-00-118-1243
Switch box (unit A), 97403-13229E6776 (old)	1	3	97403-13229E5795
Fire extinguisher, 5 lb., A-A-1106	2	4	4210-00-270-4512
Cable assembly	1	5	97403-13226E7626
Accessory box	2	6	97403-13226E7737

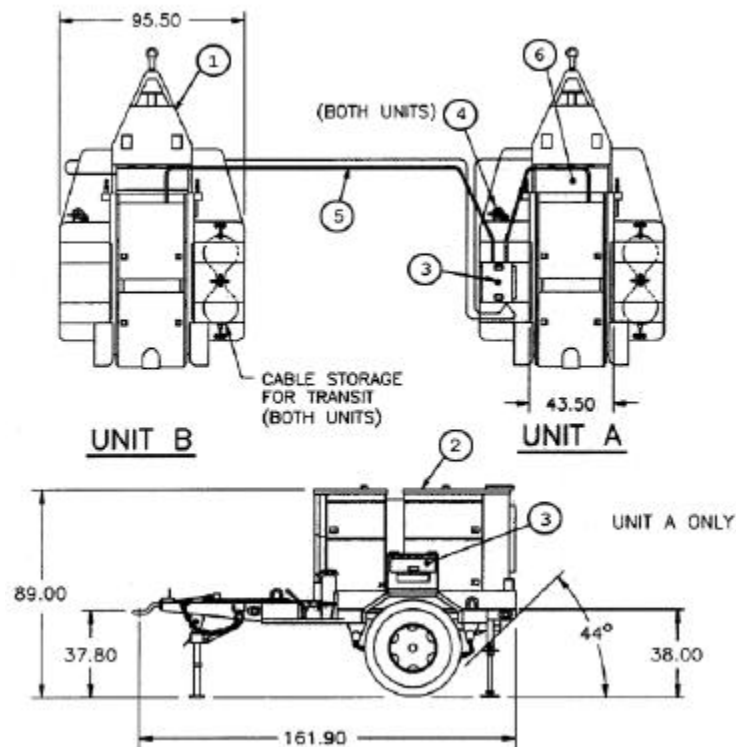


FIGURE E-27 PP-AN/MJQ-12A

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MIL-HDBK-633F

APPENDIX E
CHARACTERISTICS DATA SHEET
100 kW Diesel Engine Driven Generator

Nomenclature	Gen Set, 100 kW, DED, 50/60 Hz
Model Number	MEP-007B
NSN	6115-01-036-6374
LIN	J38712
SSN	M544
Weight	dry: 6680 lb; wet: 7500 lb; shipping: 8400 lb

Dimensions: 106.0 x 40.0 x 65.0 in. Cube: 159 cu. ft.

Engine: 6 cylinder Diesel, 217 hp @ 1800 RPM, 24 VDC starter. Liquid cooled.

Fuels: Diesel: DL-1, DL-2 and Jet fuel: JP-8, Jet A-1.

Fuel tank: 91 gallons. fuel consumption: 8.5 gal/hour

Electrical: Drip proof generator enclosure, fungus & moisture treated, solid state voltage regulator, solderless connectors, Brushless rotary exciter. Capable of parallel operation.

Reliability: 680 Hr. MTBF (specified).

Protective Devices: Short circuit, overvoltage, overload, reverse power, low oil pressure, high temperature, low fuel, and overspeed.

Instrumentation: On/off switch, Hour, volt, frequency, ammeter, Wattmeter, oil pressure, coolant temperature, battery charging ammeter, fuel level and fault indication.

EMI: Suppressed to MIL-STD-461 limits. EMP: Not protected

Connection	120/208V, 3 phase, 4 wire	240/416V, 3 phase, 4 wire
freq	50 Hz	60 Hz
Volt adj range	190 - 213	197 - 240
		380 - 426
		395 - 480

Electric Power Rating: 100 kW, 60 Hz or 83.3 kW, 50 Hz @ 0.8 pf from -25 °F (-65 °F w/ wint kit) to 125 °F/MSL, 107 °F/5000 ft.

Electric Power Quality	Volt	Freq
Regulation	1%	0.25% (adj)
Short term steady state stab (30 sec)	1%	0.5%
Long term steady state stab (4 hr)	2%	1%
Application/Rejection of rated load recovery	15% dip 0.5 sec	*4% @ 75% rated 2 sec load.
Max waveform deviation factor	5%	
Individual waveform harmonic	2%	
motor load / recovery	30% dip / 0.7 sec	

Environmental Capability: -25 °F to 125 °F, rain, humidity, altitude, sand/dust, transportation, -65 °F cold storage, salt spray, fungus.

Optional Equipment			
Description	NSN	Weight (lb.)	Effect on Dim.(in.)
Wntzn Kit (fuel)	6115-00-xxx-xxxx		int
Wntzn Kit (elect)	6115-00-xxx-xxxx		int
Wntzn Kit, Aux, Fuel	6115-00-463-9098	350	41 x 40 x 26
Wntzn Kit, Aux, Elect	6115-00-463-9098	260	36 x 27 x 19
Remote Control Box	6115-00-420-8490	8	int.
Load Bank	6115-00-463-9086	370	H+19
Wheel Mounting Kit	6115-00-463-9089	580	H+13, L+9, W+30
Panel, Auto, load transfer, 60 Hz	6115-00-477-7932	825	44 x 19 x 42

Human Factors: MIL-STD-1474. Noise: 85 dBA @ 25 ft.

Technical Manuals			
Army	Air Force	Marine Corps	Navy
TM5-6115-600-12	TO35C2-3-442-1	TM-07464-12	P-8-628-12
TM5-6115-600-34	TO35C2-3-442-2	TM-07464-34	P-8-628-34
TM5-6115-600-24P	TO35C2-3-442-4	SL-4-07464G	P-8-628-24P
LO-5-6115-600-12			

FIGURE E-28 100 kW Diesel Engine Driven Generator

APPENDIX E
CHARACTERISTICS DATA SHEET
100 kW Diesel Engine Driven Generator



MEP-007B

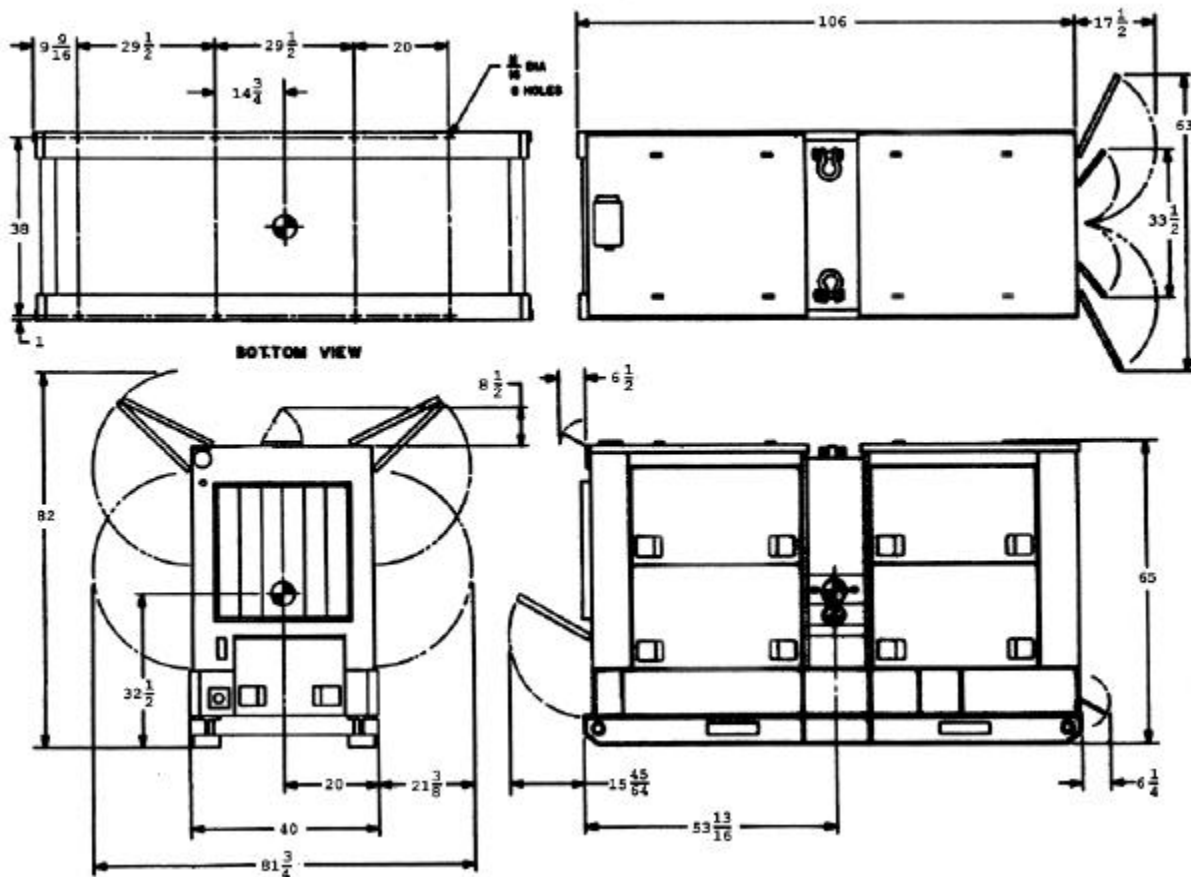


FIGURE E-28 100 kW Diesel Engine Driven Generator - continued

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MIL-HDBK-633F

APPENDIX E
CHARACTERISTICS DATA SHEET
PU-495B/G, POWER UNIT, DED, 100 kW, 50/60 Hz, TRLMTD

NSN	6115-01-134-0165	Dimensions (in.)	183.1 x 96.0 x 81.5
LIN	J35801	Op. Weight	10650 lb.
SSN	M547	Ship weight	10400 lb
ASSMB	TA-13226E1340	Ship Cube	855 cu ft
SPEC	MIL-G-53010	Camouflage	97403-13226E7490

COMPONENT	QTY	FIND	IDENTIFIER
3-1/2 Ton modified Trailer, M353	1	1	97403-13220E6330
Generator set, DED, 100 kW, 50/60 Hz, MEP-007B	1	2	6115-01-036-6374
8 lb engineers hammer	1	3	5120-00-251-4489
Ground rod, 9 ft	1	4	5975-00-296-5324
Fire extinguisher, 5 lb., A-A-1106	1	5	4210-00-270-4512

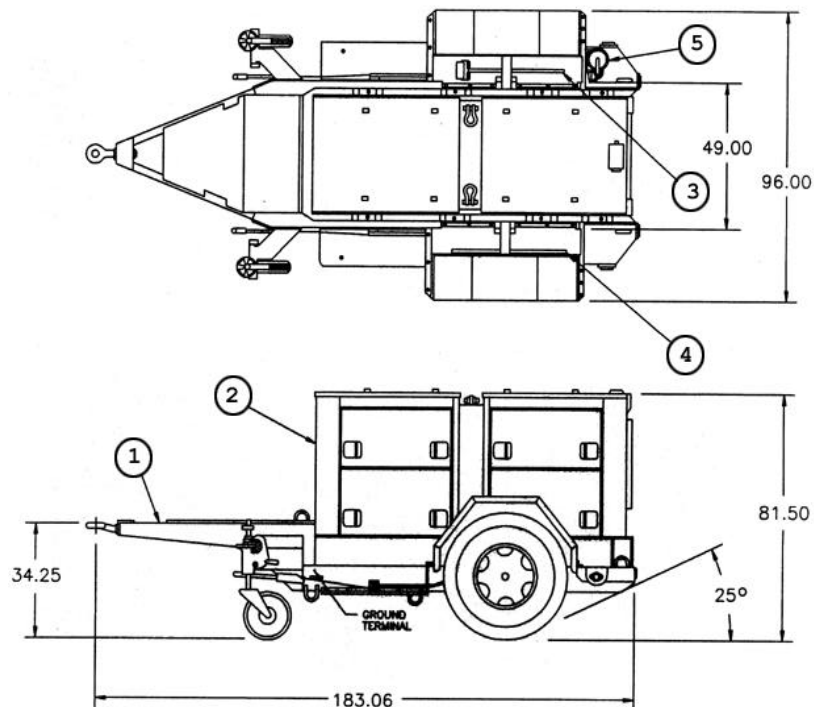


FIGURE E-29 PU-495B/G

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MIL-HDBK-633F

APPENDIX E
CHARACTERISTICS DATA SHEET
200 kW, DED, Generator Set

Nomenclature	Gen Set, DED, 200 kW, 50/60 Hz	Gen Set, DED, 200kW, 50/60 Hz
Model Number	MEP-009A	MEP-108A
NSN	6115-00-133-9104	6115-00-935-9729
LIN	J40158	J40150
SSN	M504	M504
Fuel cons.	10 gph @ rated load	16 gph @ rated load
Weight	10260 lb	10350 lb
Dim (LxWxH in)	114 x 50 x 75 (247 ft ³)	114 x 50 x 75 (247 ft ³)
TRLMTD config	AN/MJQ11: FIG E-32	

Engine: 6 cylinder Diesel, 344 hp @ 1800 RPM (60 Hz), 296 hp @ 1500 RPM (50 Hz), liquid cooled, 24 Volt starter.

Fuels: Diesel: DL-1, DL-2; Jet fuel: JP-8, Jet A-1. Fuel tank: 130 gal.

Electrical: Drip proof generator enclosure, fungus & moisture treated, solid state voltage regulator, brushless rotary alternator.

Protective Devices: Overload, over voltage, short circuit, reverse power, low oil pressure, high temperature, low fuel, overspeed.

Instrumentation: Hourmeter, voltmeter, frequency meter, ammeter, wattmeter, oil pressure, battery charge, fault indicating system, temp, fuel level.

EMI: Suppressed to MIL-STD-461 limits. EMP: Not protected.

Connection	120/208V, 3 phase, 4 wire		240/416 V, 3 phase, 4 wire	
Operating freq	50 Hz	60 Hz	50 Hz	60 Hz
Volt adj range	190 to 213	197 to 240	380 to 426	395 to 480

Electric Power Rating: 200 kW, 60 Hz or 167 kW, 50 Hz @ 0.8 power factor from -25 °F (-65 °F w/ wint kit) to 125 °F/MSL, 107 °F/5000 ft.

Electric Power Quality	MEP-009A		MEP-108A	
	Volt	Freq	Volt	Freq
Regulation	3%	2-3% (adj)	1%	0.25%
Short term steady state stab (30 sec)	2%	2%	1%	0.5%
Long term steady state stab (4 hr)	4%	3%	2%	1%
Application/Rejection of rated load recovery	20%/20% 3 sec	3%/4% 3 sec	15%/15% 0.5 sec	4%/4% 2 sec
Max waveform deviation factor	5%		5%	
Individual waveform harmonic	2%		2%	
motor load recovery	40% dip 5 sec		30% dip 0.7 sec	

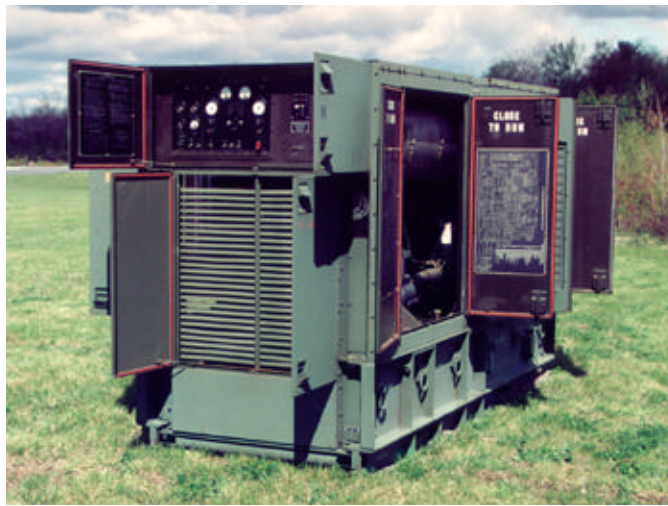
Reliability: 009A: 520 HR MTBF specified; 108A: 480 hr MTBF specified.

Optional Equipment			
Description	NSN	Weight	Effect on Dim.
fuel burning wint kit	6115-00-403-3761	85 lb	int
electrical wint kit	6115-00-489-7285	45 lb	int
Aux fuel burning wint kit	6115-00-463-9098	350 lb	41 x 40 x 26 (Aux)
Aux electrical wint kit	6115-00-463-9099	260 lb	36 x 27 x 19 (Aux)
Remote control box	6115-00-420-8490	8 lb	int
Load bank	6115-00-403-3762	580 lb	H+23 in
Auto load tranf panel, 60 Hz	6115-00-471-7932	825 lb	44 x 19 x 42 (Aux)
Paralleling cable, 009A	6140-00-197-4934	4 lb	negligible
Precise relay assembly, 009A	6115-00-199-1616		int

Technical Manuals			
Army	Air Force	Marine Corps	Navy
TM5-6115-458-12	TO35C2-3-443-1	TM 07536A-12	NAFAC P-8-629-12
TM5-6115-458-34	TO35C2-3-443-2	TM 07536A-35	NAFAC P-8-629-34
TM5-6115-458-24P	TO35C2-3-443-4	SL-4-07536	NAFAC P-8-629-24P

FIGURE E-30 200 kW, DED Generator Set

APPENDIX E
CHARACTERISTICS DATA SHEET
200 kW, DED, Generator Set



MEP-009A or MEP-108A

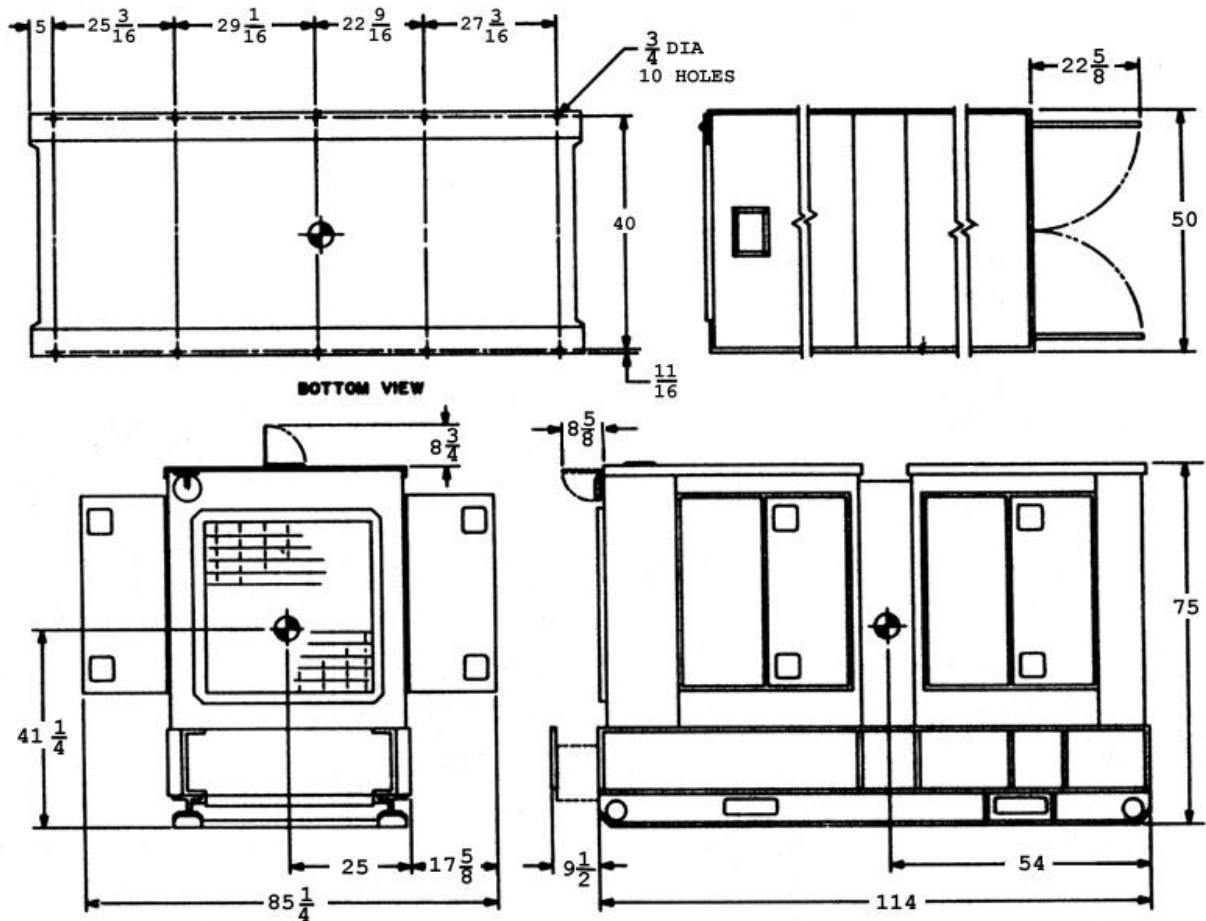


FIGURE E-30 200 kW, DED, Generator Set - Continued

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APPENDIX E
CHARACTERISTICS DATA SHEET
200 kW Diesel Engine Driven Generator

Nomenclature	Gen Set, 200 kW, DED, 50/60 Hz
Model Number	MEP-009B
NSN	6115-01-051-4096
LIN	J40158
SSN	M504
Dimensions (LxWxHin)	114 x 50 x 75 (247 cu. ft.)
Weight	dry: 10500 lb; wet: 11500 lb
TRLMTD config	AN/MJQ-11A; FIG E-33

Engine: Diesel, 340 horsepower @ 1800 RPM (60 Hz), 290 horsepower @ 1500 RPM (50 Hz), 24 VDC starter, liquid cooled.

Fuels: Diesel: DL-1, DL-2; Jet fuel: JP-8, Jet A-1.

Fuel tank: 130 gallons. fuel consumption: 16 gal/hour

Electrical: Drip proof generator enclosure, fungus & moisture treated, solid state voltage regulator, solderless connectors, Brushless rotary exciter. Capable of parallel operation.

Protective Devices: Short circuit, overvoltage, overload, reverse power, low oil pressure, high temperature, low fuel, and overspeed.

Instrumentation: Hourmeter, voltmeter, frequency meter, ammeter, Wattmeter, oil pressure, coolant temperature, battery charging ammeter, fuel level and fault indication.

EMI: Suppressed to MIL-STD-461 limits. EMP: Not protected.

Connection	120/208V, 3 phase, 4 wire	240/416V, 3 phase, 4 wire
Frequency	50 Hz	60 Hz
Volt adj range	190 - 213	197 - 240
		380 - 426
		395 - 480

Electric Power Rating: 200 kW, 60 Hz (167 kW, 50 Hz) @ 0.8 pf from -25 °F (-65 °F w/ wint kit) to 125 °F/MSL, 107 °F/5000 ft.

Electric Power Quality	Volt	Freq
Regulation	1%	0.25%
Short term steady state stab (30 sec)	1% bandwidth	0.5% bandwidth
Long term steady state stab (4 hr)	2% bandwidth	1% bandwidth
Application/Rejection of rated load	15%, 0.5 sec recovery	4%, 2 sec recovery
Max waveform deviation factor	5%	
Individual waveform harmonic	2%	
motor load	30% dip, 0.7 sec recov	

Environmental Capability: -25 °F to 125 °F, rain, humidity, altitude, sand/dust, transportation, -45 °F cold storage, salt spray, fungus.

Human Factors: MIL-STD-1474. Noise: 93 dBA @ 25 ft.

Reliability: 468 hr MTBF specified.

Optional Equipment			
Description	NSN	Weight	Effect on Dim.
Fuel burning wint kit	6115-01-xxx-xxxx		int
Electrical wint kit	6115-01-xxx-xxxx		int
Wheel kit	2530-01-221-8306	8 lb	H+

Technical Manuals			
Army	Air Force	Marine Corps	Navy
TM5-6115-614-12	TO35C2-3-443-1	TM 07536A-12	NAVFAC P-8-645-12
TM5-6115-614-34	TO35C2-3-443-2	TM 07536A-35	NAVFAC P-8-645-34
TM5-6115-614-24P	TO35C2-3-443-14	SL-4-07536-25B	NAVFAC P-8-645-24P

FIGURE E-31 200 kW Diesel Engine Driven Generator

APPENDIX E
CHARACTERISTICS DATA SHEET
200 kW Diesel Engine Driven Generator



MEP-009B

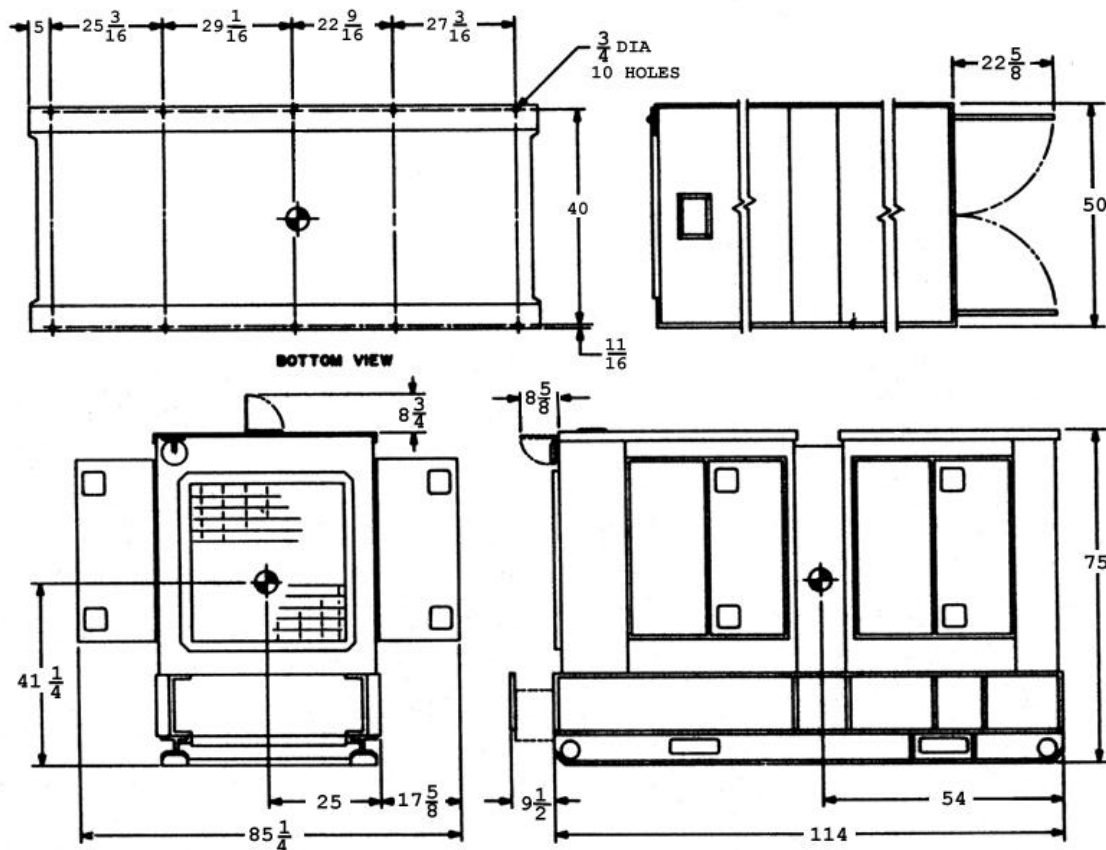


FIGURE E-31 200 kW Diesel Engine Driven Generator - continued

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APPENDIX E
CHARACTERISTICS DATA SHEET

PP-AN/MJQ-11* POWER PLANT, DED, 200 kW, 50/60 Hz, TRLMTD

NSN (11)	6115-00-134-8485	LxWxH (in.)	348 x 96 x 103 (1991 ft ³)(each unit)
LIN	P27821	Op. Weight	20740 lb (unit A) 20000 lb (unit B)
SSN	M527	Ship weight	19920 lb(unit A) 19160 lb (unit B)
ASSMB	TA-13220E6338	Ship Cube	1991 cu ft (each unit)
SPEC	MIL-P-53069	Camouflage	

* PP-AN/MJQ-11A, NSN 6115-00-394-9585, uses MEP-009B in lieu of MEP-009A

COMPONENT	QTY	FIND	IDENTIFIER
Semi trailer, commercial	2	1	
Generator set, DED, 200 kW, 50/60 Hz, MEP-009A or MEP-009B (in PP-AN/MJQ-11A)	2	2	6115-01-051-4096 6115-00-133-9104
Accessory box	2	3	
Fire extinguisher, 5 lb., A-A-1106	2	4	4210-00-270-4512
Distribution box (unit A)	1	5	97403-13226E2180
Cable assembly	1	6	97403-13218E5088
Cable assembly	1	7	97403-13218E5089

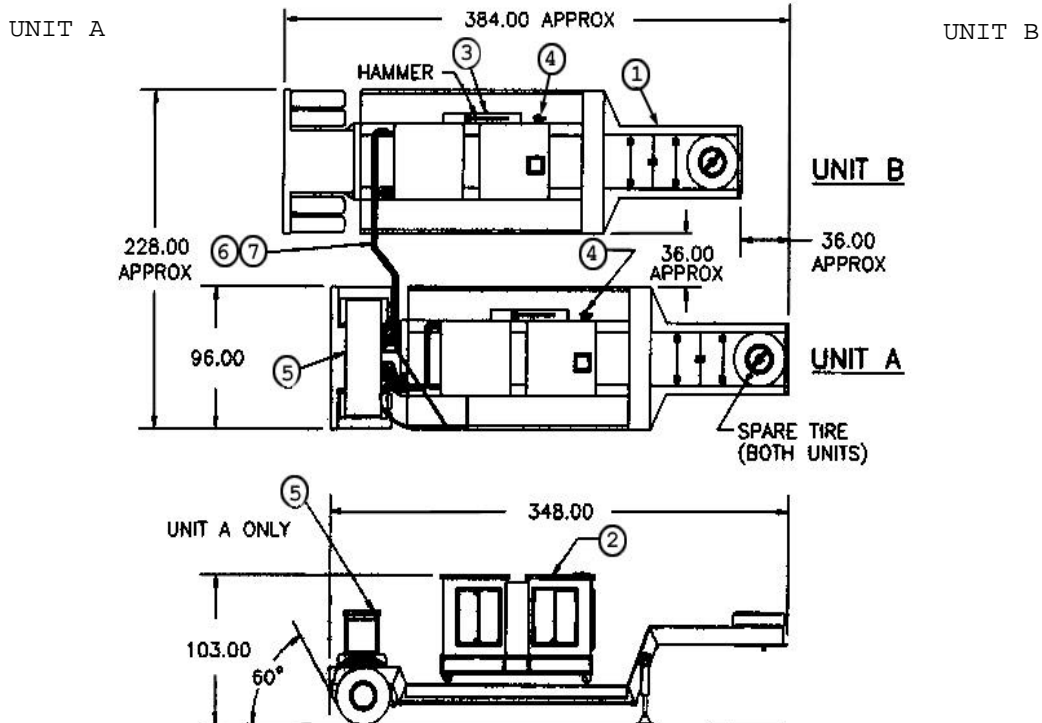


FIGURE E-32 AN/MJQ-11A

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APPENDIX E
CHARACTERISTICS DATA SHEET
500 kW Diesel Engine Driven Generator

Nomenclature	Gen Set, 500 kW, DED, 50/60 Hz	
Model Number	MEP-029A	MEP-029B
NSN	6115-01-030-6085	6115-01-318-6302
LIN	G40424	
SSN	M577	
Dimensions (LxWxH)	219 x 88 x 120 in. (1338 cu ft)	
Weight	dry: 32550 lb; wet: 34050 lb	

Engine: 12 cyl Diesel, 830 horsepower @ 1800 RPM (60 Hz), 690 horsepower @ 1500 RPM (50 Hz), 24 VDC starter, liquid cooled.

Fuels: Diesel: DL-1, DL-2. Emergency: Jet fuel: JP-8, Jet A-1.

Fuel tank: 117 gallons. fuel consumption: 37 gal/hour

Electrical: Drip proof generator enclosure, fungus & moisture treated, solid state voltage regulator, solderless connectors, Brushless rotary exciter. Capable of parallel operation. Circuit breaker.

Reliability: 500 hr MTBF (specified).

Protective Devices: Overvoltage, short circuit, overload synchronizing check relay, reverse power, low oil pressure, high coolant temp, high oil temp, low fuel, and overspeed, annunciator alarm System.

Instrumentation: Voltmeter, frequency meter, ammeter, hourmeter, kilowattmeter, oil pressure, oil temperature, coolant temperature, battery charging ammeter, fuel level, 50/60 Hz clock.

EMI: Suppressed to MIL-STD-461 limits. EMP: None.

Voltage connection	120/208V, 3 phase, 4 wire		240/416V, 3 phase, 4 wire	
Operating freq	50 Hz	60 Hz	50 Hz	60 Hz
Volt adj range	190 to 213	197 to 250	380 to 426	395 to 500

Electric Power Rating: 500 kW, 60 Hz (417 kW, 50 Hz) @ 0.8 pf from 32 °F to 125 °F/ MSL; 400 kW(334 kW) @ 0.8 pf to 107 °F/5000 ft; 375 kW(313 kW) @ 0.8 pf to 95 °F/8000 ft. Housing kit and built in electric engine preheat system extends lower temperature limit to -25 °F.

Electric Power Quality	Volt	Freq
Short term steady state stab (30 sec)	1% bandwidth	0.5% bandwidth
Long term steady state stab (4 hr)	2% bandwidth	1% bandwidth
Application/rejection of rated load	20%/30%; 3/NS sec recov	4%; 4 sec recov
Max waveform deviation factor	5%	
Individual waveform harmonic	2%	
Regulation	2%	0.25% isoc; 0-3% adj

Environmental Capability: 32 °F to 125 °F, rain, humidity, altitude, sand/dust, transportation, -65 °F cold storage, salt spray, fungus.

Noise: Housed: 86 dBA @ 25 ft. Unhoused: 89 dBA @ 25 ft.

Human Factors: MIL-STD-1474.

Optional Equipment			
Description	NSN	Weight-lb	Effect on Dim.(in.)
Housing kit	6115-01-070-7550	1950	negligible
Remote control module	6115-01-070-7553	371	33.8x23.5x58.8 (Aux)
Auto control module	6115-01-275-7912	267	30.8x13.3x66.4 (Aux)
Remote control cable	6115-01-087-4127	150	None. Cable is 1000 ft

Technical Manuals			
Army	Air Force	Marine Corps	Navy
TM5-6115-593-12	TO-35C2-3-463-1		
TM5-6115-593-34	TO-35C2-3-463-2		
TM5-6115-593-24P	TO-35C2-3-463-4		

FIGURE E-33 500 kW DED Generator, MEP-029A, MEP-029B

APPENDIX E
CHARACTERISTICS DATA SHEET
500 kW Diesel Engine Driven Generator

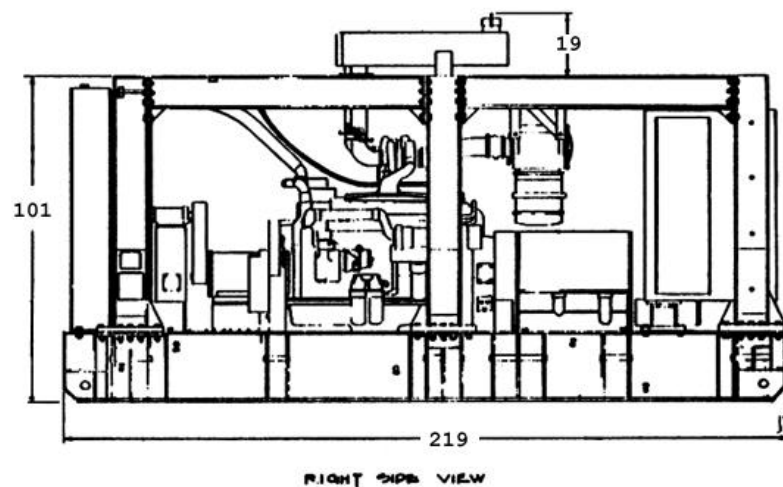
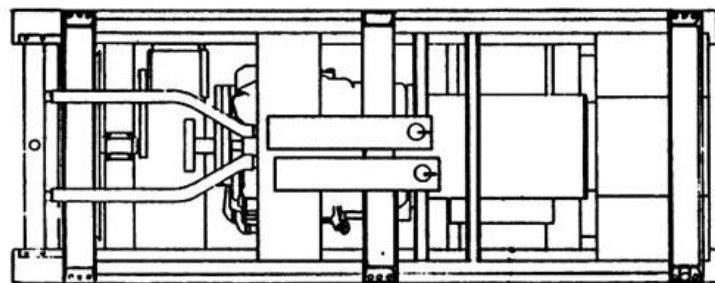
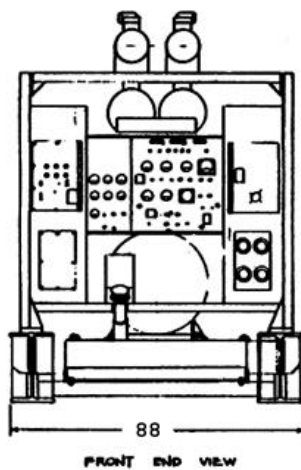
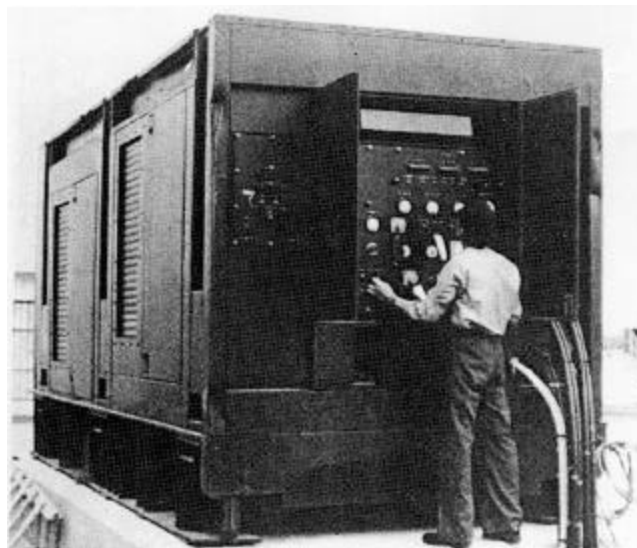


FIGURE E-33 500 kW DED Generator, MEP-029A, MEP-029B - continued

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APPENDIX E
CHARACTERISTICS DATA SHEET
750 kW Diesel Engine Driven Generator

Nomenclature	Gen Set, 750 kW, DED, 50/60 Hz, Prime Power, Housed, Wheel Mounted
Model Number	MEP-012A
NSN	6115-00-143-3850
LIN	J
SSN	M
Dimensions (LxWxHin)	241 x 96 x 101 (1353 cu ft)
Dry Weight	24500 lb.
Wet Weight	25374 lb.

Engine: 12 cyl, turbocharged Diesel, 1235 hp @ 1800 RPM (60 Hz), 1030 hp @ 1500 RPM (50 Hz), liquid cooled, 24 VDC starter.

Fuels: Diesel: DL-1, DL-2. Emergency: Jet fuel: JP-8, Jet A-1.

Fuel tank: 42 gallons. fuel consumption: 55 gal/hour.

Electrical: Drip proof generator enclosure, fungus & moisture treated, solid state voltage regulator, solderless connectors, Brushless rotary exciter. Capable of parallel operation. Circuit breaker.

Protective Devices: Overvoltage, short circuit, overload synchronizing check relay, reverse power, low oil pressure, high coolant temp, high oil temp, low fuel, and overspeed, annunciator alarm System.

Instrumentation: Voltmeter, frequency meter, ammeter, hourmeter, kilowattmeter, oil pressure, oil temperature, coolant temperature, battery charging ammeter, fuel level, 50/60 Hz clock.

EMI: Suppressed to MIL-STD-461 limits. EMP: Not protected.

Connection	2200/3800V, 3 phase, 4 wire	2400/4160V, 3 phase, 4 wire
Frequency	50 Hz	60 Hz
Voltage adj range	3240 to 3960	3745 to 4574

Electric Power Rating: 750 kW, 60 Hz (625 kW, 50 Hz) @ 0.8 pf from -25 °F to 125 °F/MSL, 90 °F/1500 ft; 600 kW(500 kW) to 107 °F/5000 ft.

Electric Power Quality	Volt	Freq
Regulation	2%	0-5% adjustable
Short term steady state stab (30 sec)	1%	0.5%
Long term steady state stab (4 hr)	2%	1%
Application/Rejection of rated load	20%; 3 sec recovery	3%/4%; 4 sec recovery
Max waveform deviation factor	5%	
Individual waveform harmonic	2%	

Environmental Capability: -25 °F to 125 °F, rain, humidity, altitude, sand/dust, transportation, -65 °F cold storage, salt spray, fungus.

Mobility: Maximum speed: 10 MPH on unimproved/20 MPH on improved roads.

Noise: Housed: 85 dBA @ 25 ft.

Human Factors: MIL-STD-1474.

Optional Equipment: none

Technical Manuals			
Army	Air Force	Marine Corps	Navy
TM9-6115-622-12	TO35C2-3-474-1	TM6115-12/10	NAVFAC P8-635-12
TM9-6115-622-34	TO35C2-3-474-2	TM6115-34/	NAVFAC P8-635-34
TM9-6115-622-24P	TO35C2-3-474-4	TM6115-24/	NAVFAC P8-635-24P

FIGURE E-34 750 kW DED Generator, MEP-012A

APPENDIX E
CHARACTERISTICS DATA SHEET
750 kW Diesel Engine Driven Generator

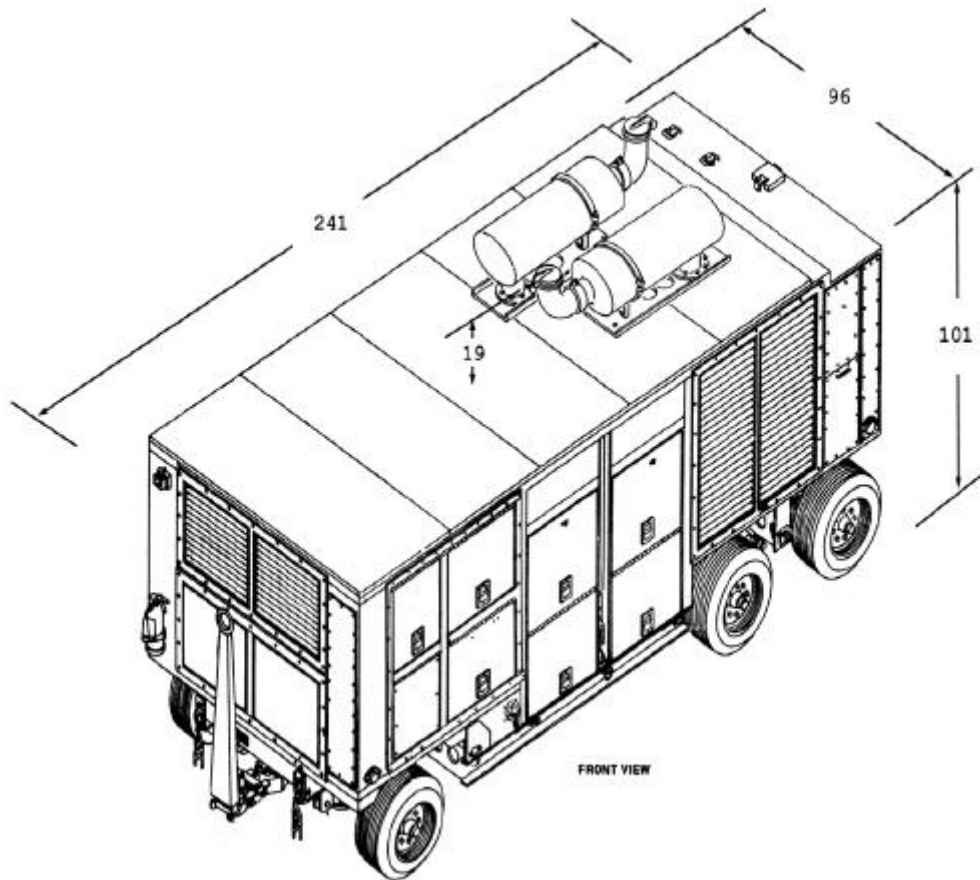


FIGURE E-34 750 kW DED Generator, MEP-012A - continued

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APPENDIX E
CHARACTERISTICS DATA SHEET
750 kW Diesel Engine Driven Generator Set

Nomenclature	Gen Set, 750 kW, DED, 50/60 Hz, Housed, Prime Power
Model Number	MEP-208A
NSN	6115-00-450-5881
LIN	J30093
SSN	M564
Dimensions (LxWxHin)	330 x 96 x 100 in. (with 24 ft ² control room)(1850 ft ³)
Wet Weight	39600 lb.

Engine: 12 cyl, turbocharged Diesel, 1235 hp @ 1800 RPM (60 Hz), 1030 hp @ 1500 RPM (50 Hz), liquid cooled, 24 VDC starter.

Fuels: Diesel: DL-1, DL-2; Jet fuel: JP-8, Jet A-1.

Fuel tank: 134 gallons. Fuel consumption: 55 gal/hour.

Electrical: Drip proof generator enclosure, fungus & moisture treated, solid state voltage regulator, solderless connectors, Brushless rotary exciter. Capable of parallel operation. Circuit breaker.

Reliability: 1200 hr MTBF (specified).

Protective Devices: Overvoltage, short circuit, overload synchronizing check relay, reverse power, low oil pressure, high coolant temp, high oil temp, low fuel, and overspeed, annunciator alarm system.

Instrumentation: Voltmeter, frequency meter, ammeter, hourmeter, kilowattmeter, oil pressure, oil temperature, coolant temperature, battery charging ammeter, fuel level, 50/60 Hz clock.

EMI: Suppressed to MIL-STD-461 limits. EMP: None.

Connection	2200/3800V, 3 phase, 4 wire	2400/4160V, 3 phase, 4 wire
Frequency	50 Hz	60 Hz
Volt adj range	3240 to 3960	3745 to 4574
Freq adj range	48 - 52	58 - 62

Electric Power Rating: 750 kW 60 Hz (625 kW, 50 Hz) @ 0.8 pf from -25 °F to 125 °F/MSL, 90 °F/1500 ft; 600 kW(500 kW) to 107 °F/5000 ft; 563 kW(469 kW) to 95 °F/8000 ft.

Electric Power Quality	Volt	Freq
Regulation	2%	0-5% adjustable
Short term steady state stab (30 sec)	1%	0.5%
Long term steady state stab (4 hr)	2%	1%
Application/Rejection of rated load	20%/30%; 3 sec recov	3%/4%; 4 sec recov
Max waveform deviation factor	5%	
Individual waveform harmonic	2%	

Environmental Capability: -25 °F to 125 °F, rain, humidity, altitude, sand/dust, transportation, -65 °F cold storage, salt spray, fungus.

Human Factors: MIL-STD-1474.

Noise: 85 dBA @ 25 ft, housed (89 dBA unboxed).

Optional Equipment			
Description	NSN	Weight-lb	Effect on Dim.(in.)
Remote control module	6115-00-xxx-xxxx	371	stored in contrl rm
Remote control cable	6115-00-xxx-xxxx	150	None-Cable is 1000 ft

Technical Manuals			
Army	Air Force	Marine Corps	Navy
TM9-6115-604-12			NAVFAC P-8-633-12
TM9-6115-604-34			NAVFAC P-8-633-34
TM9-6115-60424P			NAVFAC P-8-633-24P

FIGURE E-35 750 kW DED Generator, MEP-208A

APPENDIX E
CHARACTERISTICS DATA SHEET
750 kW Diesel Engine Driven Generator

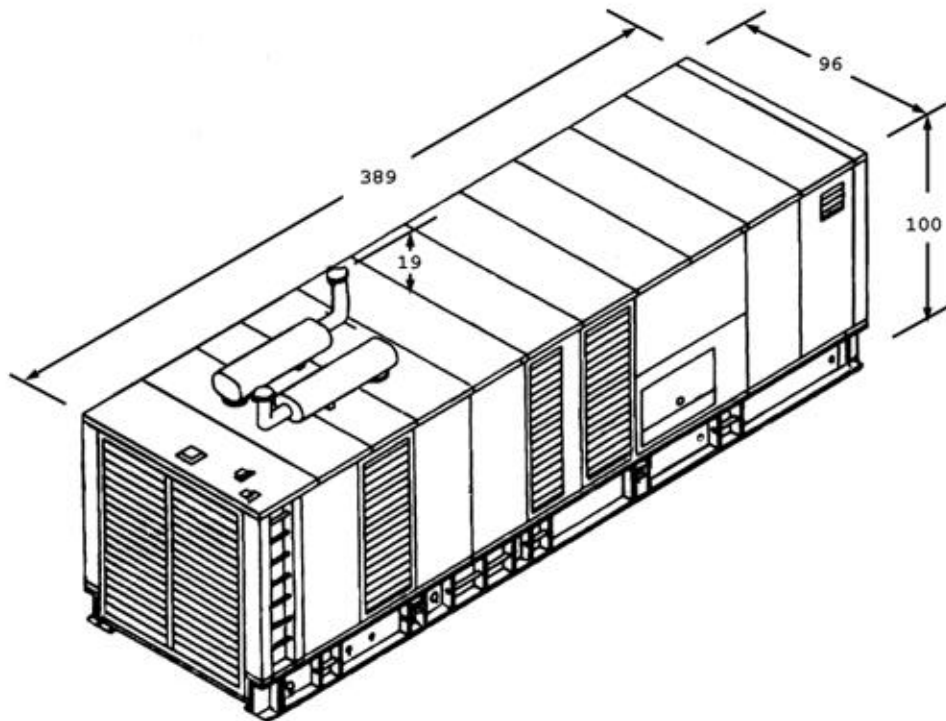
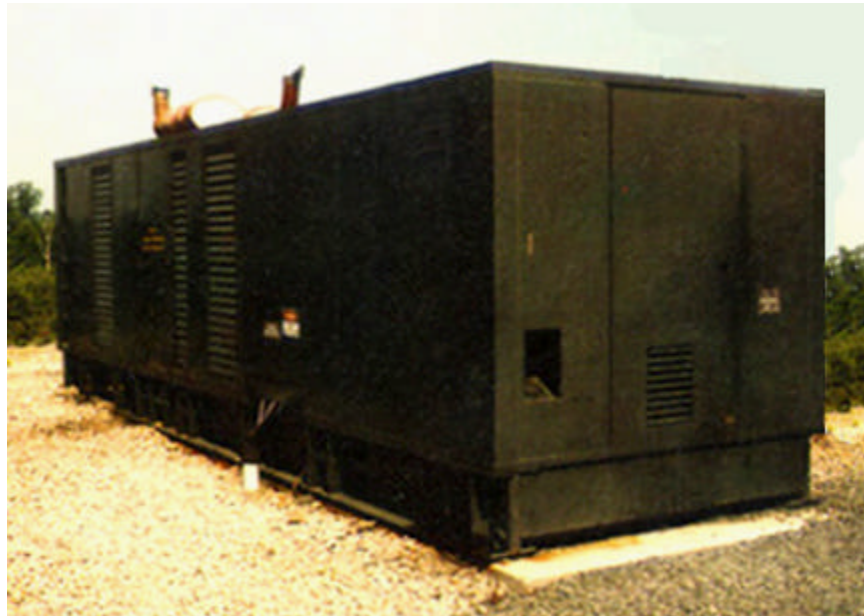
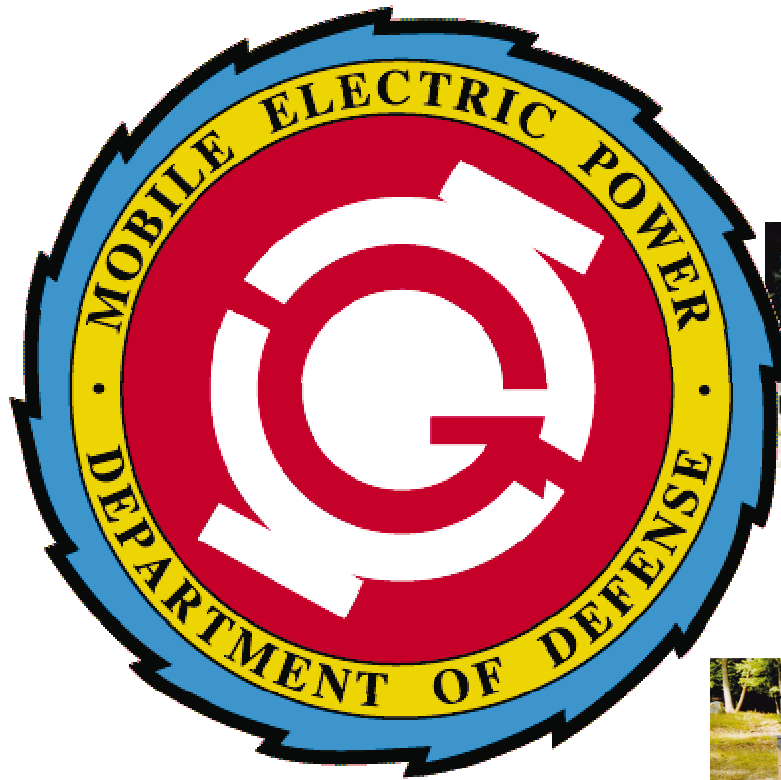


FIGURE E-35 750 kW DED Generator, MEP-208A - continued

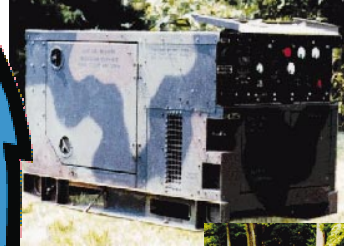
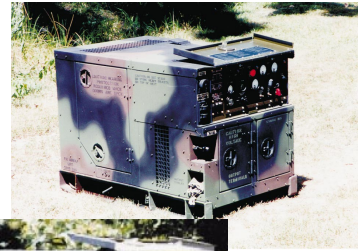
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